

**IN THE CORONER'S COURT OF THE REPUBLIC OF SINGAPORE**

CORONER'S INQUIRY No. 2014/2012

DECEASED: SHANE TRUMAN TODD

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**FINDINGS**

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## TABLE OF CONTENTS

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<b>FINDINGS .....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>1</b>
<b>BRIEF OVERVIEW OF THE PROCEEDINGS.....</b>	<b>1</b>
NATURE OF INQUIRIES UNDER THE ACT .....	1
THE ROLE OF STATE COUNSEL .....	2
PROPERLY INTERESTED PERSONS.....	2
<b>ISSUES TO BE ADDRESSED.....</b>	<b>7</b>
<b>PRELIMINARY ISSUE.....</b>	<b>8</b>
<b>THE DECEASED’S LIFE IN SINGAPORE .....</b>	<b>12</b>
THE DECEASED’S BACKGROUND IN THE US .....	12
RELOCATING TO SINGAPORE.....	13
THE DECEASED’S WORK AT THE IME.....	13
<i>The scope of the deceased’s work at the IME from December 2010 to March 2011 .....</i>	<i>14</i>
<i>The scope of the deceased’s work at the IME from March 2011 to June 2012.....</i>	<i>14</i>
<i>The IME’s purchase of the MOCVD System from Veeco .....</i>	<i>16</i>
<i>The IME’s dealings with Huawei .....</i>	<i>18</i>
<i>The IME’s dealings with Aurrion .....</i>	<i>22</i>
THE DECEASED’S LIFE FROM MARCH 2012 ONWARDS .....	26
<i>The deceased’s psychiatric condition .....</i>	<i>26</i>
<i>The deceased’s complaints to his family.....</i>	<i>27</i>

THE DECEASED'S RESIGNATION FROM THE IME .....	28
THE FINAL DAYS OF THE DECEASED'S LIFE .....	30
<b>THE EVENTS SURROUNDING THE DECEASED'S DEATH .....</b>	<b>32</b>
EVENTS ON 24 JUNE 2012 .....	32
<i>The discovery of the deceased's body</i> .....	32
<i>The arrival of the police</i> .....	34
<i>The police investigations at the scene</i> .....	37
<i>Further events</i> .....	42
EVENTS ON 25 JUNE 2012 .....	43
EVENTS ON 26 JUNE 2012 .....	43
EVENTS ON 27 JUNE 2012 .....	43
EVENTS ON 28 JUNE 2012 .....	45
EVENTS ON 29 JUNE 2012 .....	46
EVENTS ON 30 JUNE 2012 .....	50
SUBSEQUENT ACTION BY THE TODD FAMILY .....	50
SUBSEQUENT ACTION BY IO KHALDUN .....	51
EVENTS IN DECEMBER 2012 .....	52
<b>CAUSE OF THE DECEASED'S DEATH .....</b>	<b>54</b>
THE AUTOPSY REPORT .....	54
DR ADELSTEIN'S REPORT DATED 8 OCTOBER 2012 .....	55
THE EXPERTS' RESPONSE TO DR ADELSTEIN'S REPORT .....	56
DR ADELSTEIN'S EVIDENCE DURING THE CI .....	58
THE EXPERTS' RESPONSE TO DR ADELSTEIN'S EVIDENCE DURING THE CI ....	62
<i>Weight of the deceased's lungs</i> .....	62
<i>Absence of petechiae</i> .....	63

<i>Alleged bruises</i> .....	65
The deceased's hands .....	65
The deceased's neck.....	66
The deceased's forehead .....	67
The deceased's ear .....	67
<i>The causes of death suggested by Dr Adelstein</i> .....	68
THIS COURT'S FINDING ON THE CAUSE OF DEATH .....	69
<b>FOUL PLAY OR SUICIDE? .....</b>	<b>75</b>
AUTHENTICITY OF THE EVIDENCE.....	76
<i>The deceased's HP Laptop</i> .....	76
<i>The 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes</i> .....	77
<i>The PDF Note</i> .....	79
<i>The data on the deceased's HTC mobile phone</i> .....	89
<i>Photographs taken by the police</i> .....	89
<i>This court's finding on the authenticity of the evidence</i> .....	90
THE NOK'S ALLEGATION OF FOUL PLAY .....	90
<i>Possession of confidential and valuable classified information</i> .....	91
<i>The Potential GaN Power Amplifier Project</i> .....	95
The non-materialisation of the Potential GaN Amplifier Project .....	95
Violation of export control laws / use for military applications .....	98
The deceased's involvement with both Veeco and Huawei .....	103
<i>The deceased's HDD</i> .....	104
The access on 23 June 2012 .....	104
The access on 27 June 2012 .....	107
<i>Possible types of foul play</i> .....	111
THE DECEASED'S MENTAL STATE .....	113

CI 2014/2012

Findings

THE SCENE FOUND ON 24 JUNE 2012 .....	126
OTHER CIRCUMSTANTIAL EVIDENCE.....	132
<b>SUMMARY OF THIS COURT’S FINDINGS.....</b>	<b>139</b>
<b>CONCLUSION.....</b>	<b>144</b>

## INTRODUCTION

1 These findings arise out of Coroner’s Inquiry No 2014/2012 (“CI”), which was an inquiry into the death of Shane Truman Todd (“the deceased”) under the Coroners Act (Cap 63A, 2012 Rev Ed) (“the Act”). The deceased was a Caucasian male citizen of the United States of America (“US”) and was 31 years old at the time of his passing.

## BRIEF OVERVIEW OF THE PROCEEDINGS

2 It would be useful, at the outset, to give a brief overview of the proceedings.

### *Nature of inquiries under the Act*

3 I turn first to the nature of inquiries under the Act. Section 27(1) of the Act provides that the “purpose of an inquiry into the death of any person is to inquire into the cause of and circumstances connected with the death”. To this end, the same section provides that a coroner’s inquiry must be directed to ascertaining the identity of the deceased, as well as how, when and where the deceased came by his death, insofar as these matters may be ascertained.

4 Section 27(2) of the Act also specifically provides that the Coroner at an inquiry “shall not frame a finding in such a way as to determine any question of criminal, civil or disciplinary liability, but shall not be inhibited in the discharge of his functions by any likelihood of liability being inferred from facts that he determines or recommendations that he makes”. In short, an inquiry governed by the Act is to be a *fact*-finding inquiry, not a *fault*-finding one. Other jurisdictions such as the United Kingdom, New Zealand, Australia and Hong Kong have also adopted such a legal framework. The importance of

having the proper appreciation of the nature of inquiries governed by the Act will be apparent later (see [265] below).

### ***The role of State Counsel***

5 Pursuant to regs 3(1)(a) and 3(2) of the Coroners (Conduct of Proceedings) Regulations 2011 (S 548/2011), a Deputy Public Prosecutor may assist a Coroner in the conduct of an inquiry by, amongst other things, presenting the results of the investigation into the cause of and circumstances connected with the death; tendering any evidence relevant to the inquiry; questioning any witness at the inquiry and preparing any conditioned statement of such witness; and making an opening or closing address or both. In this CI, State Counsels (and also Deputy Public Prosecutors) Mr Tai Wei Shyong, Mr Isaac Tan, Mr Prem Raj Prabakaran, Ms Krystle Chiang and Ms Teo Lu Jia from the Attorney-General's Chambers represented the interests of the State in ensuring that cases of unnatural deaths are properly investigated. Since the identity of the deceased was not in dispute, State Counsel's role in these proceedings centred on presenting all relevant evidence to assist this court to arrive at its determination as to where, when, and how the deceased died. In the course of this CI which spanned a total of 10 days from 13 to 27 May 2013, State Counsel gave an opening address and thereafter presented the evidence of 65 witnesses by way of conditioned statements and/or oral testimonies. State Counsel finally presented a closing address summarising all the evidence on 17 June 2013.

### ***Properly interested persons***

6 There were two groups of "properly interested person[s]" in this CI as defined in s 2(1) of the Act, who were, pursuant to s 35(1) of the same, permitted to examine the witnesses called, either in person or by counsel.

7 The first group of “properly interested person[s]” were the deceased’s next-of-kin (“the NOK”). The deceased’s parents, Mr Richard Boyd Todd (“Richard Todd”) and Mrs Mary Brooks Todd (“Mary Todd”) were represented by Ms Gloria James Civetta and Mr Amarjit Singh of M/s Gloria James Civetta & Company, as well as Mr Steven Lam, Mr Peter Ong Lip Cheng and Mr Foo Cheow Ming of M/s Peter Ong & Raymond Tan. The deceased’s parents were accompanied by their other three sons, namely, John Richard Todd (“John Todd”), Charles Elwell Todd (“Charles Todd”), and Dylan Koenig Todd (“Dylan Todd”) as well as Richard Todd’s sister, Mrs Mary Williamson (“Mrs Williamson”) and Mary Todd’s brother. The deceased’s NOK left the CI abruptly in the afternoon on 21 May 2013. They were apparently dissatisfied with the proceedings in relation to one particular witness, namely, Mr Luis Alejandro Andia Montes (“Luis Montes”).

8 It would be appropriate, at this juncture, to clarify the circumstances surrounding the calling of Luis Montes. At the commencement of the CI on 13 May 2013, State Counsel tendered a written Opening Statement wherein the following was stated at [44]:

44 The last person known to have seen [the deceased] alive was [Luis Montes], a French national who was Shane’s colleague at IME. They had had dinner on 23 June 2012 near Shane’s apartment, which ended at about 7:00 pm. As he is not in the jurisdiction, [Luis Montes] will not be called as a witness.

However, when State Counsel subsequently read out the Opening Statement in open court, he departed from the last sentence of [44] of the written Opening Statement and orally said that the State was still trying to make arrangements for Luis Montes to attend as a witness as he was not in the jurisdiction. During the course of the CI, State Counsel continued to impress upon the court and



the parties when we convened in my chambers that the State was still making efforts to locate Luis Montes.

9 Luis Montes subsequently arrived in Singapore at about 7 pm on 18 May 2013, a Saturday. His conditioned statement was recorded and subsequently handed over to State Counsel at about 7 pm on 20 May 2013, a Monday. Copies of Luis Montes' conditioned statement were given by State Counsel to all parties and to the court the next morning on 21 May 2013, a Tuesday, before the proceedings for the day commenced. The proceedings in court on the morning of 21 May 2013 began with the NOK's expert witness, Dr Edward H. Adelstein ("Dr Adelstein"), giving evidence by way of video-link from the US. This morning session was specially reserved for Dr Adelstein so as to accommodate his personal schedule, as well as the different time zones between Singapore and the US. After Dr Adelstein gave his evidence, and before the court adjourned for the lunch break, State Counsel stated in open court that Luis Montes was ready to give evidence in the afternoon, and requested to have Luis Montes take the stand after the court reconvened after lunch, as Luis Montes was due to fly back to Paris that very evening. The NOK's counsel did not voice any objections to this arrangement at this juncture.

10 Before we reconvened in the afternoon, the NOK's counsel requested to see me in chambers. I was informed by the NOK's counsel that the NOK wanted the examination-in-chief and cross-examination of Luis Montes to be postponed until the next day because they wanted more time to prepare. State Counsel explained that this would not be possible as Luis Montes was due to return to Paris that very evening. State Counsel also asked the NOK's counsel about the documents that the NOK wanted to find and offered to assist in the procurement of such documents, if possible. The NOK's counsel said they

were unable to identify specific documents at that time. It appeared to me that the NOK's counsel did not have any firm instructions as to what documents the NOK had wanted to look for. I indicated to the NOK's counsel that I was unable to allow the NOK's request in view of Luis Montes' schedule. In coming to a decision to turn down the NOK's request for an adjournment, I had weighed the materiality of Luis Montes' conditioned statement (which was on the whole unremarkable) against the inconvenience which would necessarily be caused to Luis Montes and the distinct possibility that the parties might not have the opportunity to lead further evidence from or question him, should the NOK's request be allowed.

11 When we resumed in open court, the NOK's counsel renewed the application for the adjournment that the NOK sought. I indicated that I had no option but to put Luis Montes on the stand in the afternoon as he was leaving Singapore that evening, and informed the NOK's counsel that he would just have to do the best that he could. The NOK got up, bowed to the court and left the proceedings upon hearing this. Luis Montes subsequently indicated that he would be willing to postpone his travel plans for one more day. The court adjourned shortly thereafter as the NOK's counsel needed to locate the NOK to take their instructions.

12 The next morning, on 22 May 2013, the NOK's counsel informed this court that the NOK no longer wished to take part in the CI and that they had been discharged by the NOK. State Counsel then clarified in open court the circumstances leading to the calling of Luis Montes as a witness. In my view, the confirmation of Luis Montes as a witness was indeed rather late, but this was due to the fact that Luis Montes was not within the jurisdiction, and not because of any reason that was within State Counsel's control. After taking into consideration the complete picture of what had transpired during the

proceedings, as well as the fact that the evidence showed that Richard and Mary Todd had actually met Luis Montes before at a get-together that they arranged for the deceased's friends at their hotel (see [116] below), I agreed with the State that Luis Montes could not reasonably be said to have been a surprise witness to the NOK. I indicated that I respected the NOK's decision to withdraw from the proceedings, but the CI nevertheless had to carry on since neither the presence nor the participation of the NOK at the CI was required under the Act. I subsequently directed State Counsel to make arrangements to extend copies of the transcripts and the documents tendered to the court to the NOK. As the deceased's brothers and his aunt, Mrs Williamson, were still present at the proceedings until 23 and 24 May 2013 respectively, I also indicated to them that they qualified as "properly interested person[s]" under the Act and thus could examine the witnesses if they wanted to. The deceased's brothers did not have any questions to ask whilst they were still present. Mrs Williamson asked a few questions during the remaining time that she was there.

13 Since the deceased's parents and his brothers withdrew from the proceedings midway, they did not give their oral evidence in court as originally planned. I nevertheless took into account the evidence given in their conditioned statements which were tendered to the court before they left. However, the inability to have their evidence tested or even clarified in court invariably affected the weight to be accorded to their evidence. As for the hearsay evidence given in these conditioned statements, I was not minded to consider such evidence as properly admitted substantive evidence given the inherent unreliability of such evidence, although I did, at various junctures, consider the issues that were raised therein (see, for example, [215] below).

14 Moving on, the second “properly interested person” in this CI was the Institute of Microelectronics (“IME”), a research institute affiliated with the Agency for Science, Technology and Research (“A\*STAR”) in Singapore. The IME was represented by Mr Philip Jeyaretnam SC, Mr Loh Kia Meng and Mr Amogh Chakrararty of M/s Rodyk & Davidson. The IME’s interest in this matter arose primarily because of the NOK’s allegations of a possible homicide linked to the deceased’s work at the IME.

15 I should also mention for completeness that on 13 June 2013, I conducted a site visit to the deceased’s apartment situated at No 56, Spottiswoode Park Road, Singapore 088648 (hereinafter referred to as “the deceased’s apartment” when referring to the specific unit on the second level in which the deceased resided, or, “the property” when referring to the entire property), where the deceased was found dead.

### **ISSUES TO BE ADDRESSED**

16 The following list provides a brief road-map of the issues that will be addressed in the findings herein:

- (a) The preliminary issue of whether there had been any improper influence of witness in this CI;
- (b) The deceased’s life in Singapore (including his work at the IME);
- (c) The events surrounding the deceased’s death;
- (d) The cause of the deceased’s death;
- (e) Whether there was any foul play involved in the deceased’s death or if the deceased had committed suicide; and

- (f) A summary of this court's findings.

### **PRELIMINARY ISSUE**

17 It is necessary, before turning to the evidence presented in this case, to address the preliminary issue of whether there had been any improper influence of witnesses in this CI. This issue arose primarily because on 11 April 2013, the deceased's immediate supervisor at the IME, namely, Dr Patrick Lo Guo-Qiang ("Dr Lo"), as well as two human resource staff from the IME, summoned and conducted a meeting with the following employees who were to be called as witnesses in this CI:

- (a) Mr Joseph Romen Cubillo ("Romen");
- (b) Mr Peter Kropelnicki Piotr;
- (c) Ms Magarita Sofia Narducci ("Magarita");
- (d) Mr Jeffrey Soon Bo Woon ("Jeffrey");
- (e) Mr Cheam Daw Don ("Don"); and
- (f) Mr Timothy Kok Kin Hon ("Timothy").

Ilker Ender Ocak ("Ilker") was also summoned to this meeting but he was on medical leave that day.

18 The transcript of the audio recording of this meeting, recorded by Romen without the knowledge of Dr Lo and the other IME staff, is reproduced below. "Male voice 1" refers to Dr Lo, while "Male voice 2" refers to Romen:

Male voice 1: "Anyway I am going to ... (not audible)... ok... I'll keep this very short cause everyone is very tired... (so am I). So all I want to say is that everyone is entitled to speak the truth... the statement we need to provide to the coroner is

(final) ... (not audible \*clothes rubbing on device\*)... and will be provided in court to the coroner, and there is a high potential to be made in public. So everything said (regarding/about) the statement... if anything confidential... you have to be very careful... the reason is that the legal advisers to look on the statement to make sure it is confidential... that's why they want to help us make sure it is not released (or) anything confidential to get yourself in trouble"

Male voice 2: "Which statement are you looking for?"

Male voice 1: "The statement which you (are going to) provide to the police ... (the final)"

Male voice 2: "The one we are going to provide during the coroner inquiry?"

Male voice 1: "They're gonna come back... they gonna come back give you the statement...you check through one more time make sure that everything is factual..."

Male voice 2: "the one we gave before today or the one will do in..."

Male voice 1: "which one, which one? (they are going to hand it back to you)... you look through... if everything is factual, no revision or even if there is any revision (not audible) once you sign it will become final

Male voice 2: "we did already sign", "No, because when we went to the Police we signed already."

Male voice 1: "they gonna come back to give it to you to look again....so you have one more chance to look at it...so the issue on this one...the statement...can be anything... talk about projects... customer... those other confidential things... That's why the legal ones will take a look at it to make sure they will not get into trouble. For instance, in my (statement) we talked with the police talk about Huawei project... (not audible). It's only between us and the police. It was not intended to be released in the public. The whole reason that IME is keeping very quiet because there is some confidential information which... we are not supposed to say (not audible)... You read IME statement, respect the customer's confidentiality... (not audible).. It's the outmost... It's the integrity of the A\*Star as well as IME... (not audible) so that is the whole reason..... (not audible)... what you need to do (not audible)... You understand what I am saying... you understand?"

Male voice 2: "Er... What I understand is that er.. I mean.. the statement has to be truth (not audible)... (Male voice 1 interrupted and said "statement has to be true")... I spoke the truth.. I have no issue during coroner's inquiry if the judge is asking for more details... we probably have to answer for that... (not audible)... anyhow..."

Male voice 1: "You'll answer yes but you make sure that the things that you say is not violating the confidential rules."

Male voice 2: "But the law is above the contract... It's above the contract

Male voice 1: "You can I mean you can ask the legal (male voice 2 interrupted and you said "No, No, No..") "you can ask the legal"

Male voice 2: "No...no... I only know the judge in court is above the contract... (main voice 1 responded "ok") (argument which is not audible)... he has the right to look into that"

Male voice 1: "ok...so exercise your judgement... if you want to say it, you go ahead and say it"

19 State Counsel was of the view that there was a possibility that an attempt was made at this meeting to try to influence the evidence of the witnesses listed above, and thus felt it necessary to bring this to my attention.

20 In my view, the substance of this meeting was that Dr Lo had told the IME employees present at that meeting to state the truth in their evidence, although they should be careful about revealing things that might breach the IME's obligations of confidentiality to its customers. Having considered the contents of this meeting, as well as the fact that all of the IME employees at the meeting, even Romen, confirmed that they did not make any amendments to their conditioned statements as a result of that meeting, and that they had no further evidence to give that had not already been given, I was satisfied that there had in fact been no improper influence of the IME employees.

21 That said, I found that the conduct of this meeting was, nevertheless, in itself improper. Dr Lo might have been motivated by a desire to protect the confidentiality of the IME's customers in good faith, but this meeting was not the proper approach to do so. First and foremost, Dr Lo should not have made any attempt to speak to witnesses about the evidence that they would give in these proceedings, as doing so would give rise to the possibility that the witnesses might, consciously or otherwise, be improperly influenced. The fact that confidential information might be revealed in the course of the proceedings was not a valid reason to speak to the witnesses about their evidence, as the requirement and duty to tell the truth in court proceedings supersedes any confidentiality or non-disclosure agreements. The oath taken by every witness before giving evidence in court is to tell the truth and "the whole truth". Dr Lo simply had no right to try to delineate or circumscribe the scope of the witnesses' conditioned statements so as to comply with the IME's confidentiality obligations. He was wrong and possibly ill-advised to have attempted to do so.

22 The correct approach that the IME should have adopted instead is as follows. If the IME was to discover that confidential information *not* relevant to the issues in the CI would be unnecessarily revealed when a conditioned statement is tendered as evidence, then the legal and proper course of action would be to make an application to the court to have the confidential portions of that conditioned statement redacted, or to have the proceedings heard in camera. In a similar vein, if confidential information *not* relevant to the issues in the CI were to be unnecessarily revealed by a witness when he or she takes the stand, then the IME can make the application to the court to order that such confidential information not be disseminated. It bears emphasising that the issue of whether confidentiality should outweigh the public interest in a public



hearing is a matter for the court to decide, and parties should not take this matter into their own hands.

23 Having disposed of this preliminary issue, I turn now to set out the evidence in relation to the deceased's life in Singapore to provide the context of his death.

## **THE DECEASED'S LIFE IN SINGAPORE**

### ***The deceased's background in the US***

24 The deceased was born on 5 September 1980 and grew up in Pomona, US. He came from a close-knitted family comprising his parents and three younger brothers. He was described as brilliant and athletic, as well as a perfectionist who sets very high standards for himself.

25 The deceased studied at the University of Florida from 1998 and obtained a Bachelors degree in Electrical Engineering. He then went on to do a Masters degree in the same discipline. Sometime in 2002, while doing his Masters degree, the deceased was diagnosed with depression and was prescribed anti-depressants. According to Mary Todd, the deceased eventually overcame his depression and managed his mental state through a healthy diet, exercise and vitamins intake. In 2005, the deceased obtained his Masters degree. Thereafter, he pursued his doctorate degree as a graduate student researcher and teaching assistant at the University of California, Santa Barbara, US ("the UCSB").

26 On 18 May 2010, the deceased sent in his application for the position of a Micro-Electro-Mechanical Systems ("MEMS") Research and Development Manager to the IME. The deceased did not disclose his previous

history of depression in the application form. On 3 August 2010, the IME offered the deceased the appointment of a Senior Research Engineer in the Sensors and Actuators Microsystems (“SAM”) Program with the IME, which the deceased eventually took up.

27 In December 2010, the deceased graduated with a Doctorate of Philosophy (“PhD”) in Electrical and Computer Engineering from the UCSB, having completed his dissertation titled “High Aspect Ratio Transmission Line Circuits Micromachined in Silicon” (“the PhD Dissertation”).

### ***Relocating to Singapore***

28 In December 2010, the deceased relocated to Singapore for his job at the IME. He resided alone at his apartment. He had a girlfriend whom he got to know in Singapore sometime in December 2010, namely, Ms Shirley Sarmiento (“Shirley”). Shirley stayed over at the deceased’s apartment on the weekends from time to time. While in Singapore, the deceased remained in relatively close contact with his family, mostly through Skype and emails.

### ***The deceased’s work at the IME***

29 As the NOK’s allegations of a possible homicide were linked to the deceased’s work at the IME, I shall, in the following sections, set out at some length the facts in relation to the following aspects:

- (a) The scope of the deceased’s work at the IME from December 2010 to March 2011;
- (b) The scope of the deceased’s work at the IME from March 2011 to June 2012;

- (c) The IME's purchase of the Metal Organic Chemical Vapour Disposition system ("the MOCVD System") from Veeco Instruments Inc ("Veeco");
- (d) The IME's dealings with Huawei Technologies Ltd (China) and/or its subsidiaries (collectively, "Huawei"); and
- (e) The IME's dealings with Aurrion Inc ("Aurrion").

I will deal with the disputed issues of fact in the later part of the findings.

*The scope of the deceased's work at the IME from December 2010 to March 2011*

30 The deceased started work at the IME on 1 December 2010. Shortly after, on 4 December 2010, the deceased underwent a medical examination as required of all employees of the IME. He did not disclose his history of depression during the medical examination.

31 As a Senior Research Engineer in the SAM research group ("the SAM Group"), the deceased worked on the design of sensors and reported to Dr Tsai Ming-Lin @ Julius Tsai ("Dr Tsai"). As part of his work, the deceased was also required to work with the MEMS research group ("the MEMS Group"). The MEMS Group, headed by Professor Dim-Lee Kwong ("Professor Kwong"), was involved in the research of microfabrication techniques for the manufacture of certain elements of the sensors and actuators designed by the SAM Group.

*The scope of the deceased's work at the IME from March 2011 to June 2012*

32 In March 2011, the deceased expressed to Professor Kwong his interest in the work of the Gallium Nitride ("GaN") research group ("the GaN

Group”), which, at that time, had just been formed and was headed by Dr Lo. GaN is a semi-conductor that can operate at high power and temperature and has important applications in power electronics, and can be used for commercial as well as defence and military applications. According to the IME, the GaN research in the IME has always been focused on commercial applications.

33 The deceased did not have any prior experience in the GaN field of research. Nevertheless, Professor Kwong agreed to the deceased’s request for the transfer because the deceased showed passion, and the requisite skills could, in any event, be learnt on the job. According to Professor Kwong’s directions, the deceased divided his time equally between the SAM and the GaN Group from March 2011 to June 2011. Thereafter, he was fully transferred to the GaN Group and reported to Dr Lo.

34 In April 2011, the IME formally launched a programme (hereinafter referred to as “the GaN-on-Silicon Programme”) to: (a) grow GaN on an 8-inch Silicon substrate; and (b) to establish a Complementary Metal-Oxide-Semiconductor (“CMOS”) process technology platform to make a device from this GaN-on-Silicon substrate for power electronics. The GaN-on-Silicon Programme is part of the A\*STAR’s Thematic, Strategic, Research Programme for GaN on Silicon (“the TSRP GaN Programme”). The GaN-on-Silicon Programme involved the following institutions:

- (a) the National University of Singapore;
- (b) the Nanyang Technological University;
- (c) two research institutes also supported by the A\*STAR, namely:
  - (i) the Institute of High Performance Computing; and

- (ii) the Institute of Materials Research and Engineering (“IMRE”).

35 The deceased assisted Dr Lo in building a team of researchers for the GaN Group. The following five researches were eventually recruited:

S/n	Researcher	Experience	Nationality
1	Mr Susai Lawrence Selvaraj (“Lawrence”)	7 years experience in GaN	Indian
2	Mr Lee Kean Boon	5 years experience in GaN	Malaysian
3	Mr Yuan Li	3 years experience in GaN	Chinese
4	Ms Wang Weizhu (“Weizhu”)	1 year specific experience in MOCVD equipment and process	Chinese
5	Mr Sun Haifeng	6 years experience in GaN	Chinese

Of these five researches, only Lawrence, Yuan Li and Weizhu were still working at the IME at the time of the CI.

36 Shane was the leader of two projects under the TSRP GaN Programme, namely: (a) the GaN-on-Silicon Programme; and (b) a feasibility study with Rolls Royce to evaluate the potential use of GaN for the development of high powered density converters.

*The IME’s purchase of the MOCVD System from Veeco*

37 One of the deceased’s initial assignments upon joining the GaN Group was to facilitate the IME’s purchase of a MOCVD System as part of the GaN-on-Silicon Programme to manufacture power electronics more cost effectively. Essentially, the MOCVD System is a tool much like an oven – it can combine metal elements and organic compounds (such as GaN) to form a deposit on a substrate (such as Silicon). However, a “recipe” would be required to govern the process to come up with the desired final product. As

part of this assignment, the deceased conducted market and technical analysis of the MOCVD System, as well as communicated with the vendors of MOCVD Systems. On 2 December 2011, after calling for an open tender and reviewing the three bids that were placed, the IME's management awarded the contract to purchase the "TurboDisc K465i GaN MOCVD System" to Veeco, a company with its corporate headquarters in New York, US.

38 From 3 to 13 January 2012, the deceased received training on the Veeco MOCVD System at a training centre of Veeco in New Jersey, US ("the Veeco Training"). Mr Surani bin Dolmanan ("Surani"), a Specialist from the Materials Analysis and Characterisation research group in the IMRE, attended the Veeco Training together with the deceased. During the Veeco Training, some demonstration wafers were grown by Veeco's engineers using the Veeco MOCVD System. Veeco couriered 50 pieces of these demonstration wafers to the IME sometime in March 2012. Weizhu and Surani conducted tests on the demonstration wafers to obtain its characterisation results to establish the quality of these wafers.

39 The MOCVD System was supposed to be stored in Clean Room No 5 in the IME when it arrived. However, as there was another unrelated system that had been donated by a company that the IME had previously worked with, Professor Kwong accepted Dr Lo's suggestion that this donated system be placed in Clean Room No 5 and a new location be sourced to house the Veeco MOCVD System when it arrived. This change of plans led to an approximately 6 months' delay in the delivery of the Veeco MOCVD System, but this did not in turn affect the schedule of the GaN-on-Silicon Programme as the GaN Group could work on the demonstration wafers in the mean time. The Veeco MOCVD System was delivered and eventually placed in Clean

Room No 6 at the IME on 16 July 2012, after the deceased's death. According to Weizhu, the deceased was upset by the delay.

*The IME's dealings with Huawei*

40 The IME has had a total of five contracts involving Huawei. The details of these contracts are set out in the table below:

S/n	Project Title	Start Date	End Date	Companies involved (other than the IME)	Country of incorporation
1	Hybrid 3D stack and demonstration of Optical Interconnects	6/11/07	5/5/09	Huawei Technologies Co Ltd	China
				Finisar Singapore Pte Ltd	Singapore
				Hitachi Cable Ltd	Japan
2	Feasibility Study – Silicon Photonics Platform with assembly for future low cost optical transceivers	12/11/10	26/8/11	Huawei Technologies Co Ltd (China)	China
3	11 <sup>th</sup> Electronics Packaging Research Consortium: Through Silicon Via (“TSV”) Silicon Interposer	9/3/11	12/11/13	HiSilicon Technologies Co Ltd	China
				Nissan Chemical Industries Ltd	Japan
				Disco Hi-Tec (Singapore) Pte Ltd	Singapore

S/n	Project Title	Start Date	End Date	Companies involved (other than the IME)	Country of incorporation
				EV Group Europe & Asia/Pacific GmbH	Germany
4	Characterisation and modelling of radio frequency devices	30/3/12	28/12/12	Huawei International Pte Ltd	Singapore
5	Through Silicon via Interposer (“TSI”) Consortium (in the process of being signed)	24/1/13	End-January 2015	Huawei Technologies Co Ltd	China
				United Microelectronics Corporation	Taiwan
				United Test and Assembly Centre	Singapore
				Tezzaron Semiconductor Corporation	US
				EV Groups Europe GmbH	Austria

41 Out of the above five projects, the deceased was only involved in the one titled “Characterisation and modelling of radio frequency devices” (*ie*, item 4 in the table above) (“the Huawei Measurement Services Project”). The Huawei Measurement Services Project was worth less than S\$15,000 and did not, in any way, involve GaN. Shane spent about an aggregate of nine days on physical laboratory work to do the measurements and his total involvement in the Huawei Measurement Services Project spanned across a few months.



42 According to the IME witnesses, there was a potential GaN related project between the IME and Huawei for the development of a GaN power amplifier (“the Potential GaN Power Amplifier Project”) that never materialised. The details of the Potential GaN Power Amplifier Project are elaborated upon in the paragraphs that follow.

43 On 18 and 19 July 2011, representatives from the IME and Huawei met in China. The deceased was not present at this meeting. As a follow-up to this meeting, the IME provided information on its GaN-on-Silicon Programme to Huawei. Sometime in late July, a telephone conference was held to further discuss the issues. This was arranged to be conducted in Chinese as the Huawei representatives preferred this arrangement. Subsequently, on or around 19 August 2011, Huawei provided the IME their device requirements for the Potential GaN Power Amplifier Project. On 24 August 2011, the higher management officers of Huawei visited the IME. Dr Lo described this meeting as a “handshake meeting” in which Huawei indicated that they still had interest in the Potential GaN Power Amplifier Project.

44 On or about 23 September 2011, the IME, through the deceased submitted a proposal to Huawei for the IME to perform the Potential GaN Power Amplifier Project for a total of S\$1.8 million. This proposal contained generic information about the task and deliverables to be performed by the IME, including the specifications for the power amplifier. The key specifications relating to the performance of the power amplifier as listed in the proposal are reproduced below:

No	Parameter	Requirement	Description
Performance			
1	Frequency	0.4 ~ 3.0 GHz	
2	P1dB	150W	Minimum

3	Drain efficiency	70% @ P1dB	Minimum
4	Gain	400 ~700 MHz: 22dB 0.7 ~ 2.2 GHz: 20dB 2.3 ~ 2.7 GHz: 18dB	Minimum
5	Input return loss	-10dB	Maximum
6	IMD	?	Maximum

45 In September 2011, the representatives of the IME and Huawei exchanged emails to arrange a meeting to further discuss the Potential GaN Power Amplifier Project. The meeting finally took place on 19 April 2012. Officers from Huawei and representatives from the IME including the deceased and the rest of the GaN Group attended this meeting. A further meeting took place on 5 June 2012, which the deceased did not attend.

46 Huawei eventually decided not to go ahead with the Potential GaN Power Amplifier Project. On 11 July 2012, one Hu Xinrong, the HiSilicon Chief System Architect from the Wireless RF Chipset Development Department of Huawei (China), emailed the IME representatives stating as follows:

Dear Prof. Ng & Selin,

I'm very sorry for my tardy reply.

Because our goal of GaN is indeterminate until now, so we couldn't starting the cooperation on SiC immediately , let's keep touch .

Thank you.

Xinrong

*The IME's dealings with Aurrion*

47 Aurrion is a US based start-up company associated with the deceased's university, the UCSB. It deals mainly with the field of photonics, which involves devices used to transmit and/or control light signals. The Chief Executive Officer of Aurrion, Mr Alexander Fang ("Alex"), was a good friend of the deceased.

48 The IME organised a meeting to be held on 14 October 2011 to discuss with potential industrial partners the formation of a TSI Consortium ("the Consortium Meeting"). TSI technology enables different electronic chips to be packaged together, on top of interposers, so that integrated functions can be performed. Such chips are used in, amongst other things, the graphics chips of computers and mobile phones.

49 The deceased and his colleague, Romen (a scientist with the Interconnect and Packaging Programme at the IME), were initially scheduled to make a presentation at the Consortium Meeting. This presentation was in relation to a potential telecommunications project between the IME and Aurrion in which Aurrion would provide a III-V planar laser ("the Aurrion Laser") and the IME would assemble the Aurrion Laser on the TSI. However, one day before the Consortium Meeting, Professor Kwong decided to cancel their presentation. According to Romen, the deceased was very upset by this.

50 Aurrion did not eventually become a member of the TSI consortium after the Consortium Meeting and the IME did not collaborate with Aurrion on any projects.

51 On 25 February 2012, the deceased forwarded to his parents a draft email to his professor at the UCSB, Professor John Bowers, for their comments. This email is reproduced below.

Hi John,

I appreciate your note about working together, it is something I would like to do. Unfortunately I can't fully recommend working with IME. I have seen many questionable management practices and decisions in the last year and IME has become a difficult place to work. There are a lot of details to the story that I won't go into here. But one example that you know a bit about is the collaboration I tried to get going with Aurion. When Alex and I tried to get a collaboration going between Aurion and IME, we put a lot of effort into generating plan for creating silicon interposers with integrated optics including the hybrid laser made by Aurion. After IME upper management reviewed the plan, they decided to forget the collaboration with Aurion and try and build the hybrid laser themselves. I almost feel as though they let me engage with Alex as much as possible so that they could collect information on how to build the laser. This is something that has bothered me immensely and has made me resistant to trying to engage any of my former colleagues into a collaboration with IME. As I have observed this and some other questionable practices and decisions, I have struggled with what I should do myself. On one hand, I feel it may be best for me to try to stay here until I find success in the project I am working on. On the other hand, I do not want to be part of an organization that operates in a way that is ethically questionable and stifling to the creative output of its employees. For the most part I have tried to maintain a good attitude, persevere, and continue to work hard. But now I am coming to the point where I think I may be better off in the long run if I come back to the States and start fresh at a new job. I know it is difficult to assess the situation as an outsider looking in, but if you have any advice that you feel may be helpful to me I would really appreciate it.

Thanks,

Shane.

52 According to Romen, the deceased had also complained to him that Dr Lo had, sometime in 2011 and in breach of intellectual property rights, asked

the deceased to procure from Alex certain Graphic Data System (“GDS”) files which would effectively contain all the technological data in relation to the Aurion Laser. When questioned about this in court, Dr Lo denied such allegations, stating that the IME did not receive any GDS files from Aurion. In any event, there would be no reason for such a request as the IME was not building its own laser, nor would it want to build its own laser. When Alex was interviewed by the Federal Bureau of Investigations (“FBI”), he had also confirmed that the deceased had never asked him about anything sensitive or confidential in relation to Aurion’s technology.

53 According to Dr Lo, he had only asked the deceased to check with Alex if he was willing to share some general market intelligence about the Silicon Photonics and the Indium Phosphide market. The relevant portion of an email sent by Dr Lo to the deceased dated 4 June 2011 is reproduced below:

Hi Shane,

If you can check with Aurion friend if they don’t mind in sharing some information with us on the following questions.

If IME or Singapore site has such InP line, would Aurion be interested? Why? And How?

(I am seriously in thinking if we need to have such set up here and in combining with our existing Si-photonics/electronics).

The relevant portion of another email sent by Dr Lo to the deceased dated 7 June 2011 is reproduced below:

Hi Shane, ...

I have few follow-up question, see if you get answer for me from your UCSB buddy? Aurion’s? Thanks.

Can Silicon Photonics go beyond 40G or is InP the only way?

Full InP integrated circuits, how would that compare to Infinera?

Processing of III-V in 8" line?

Silicon Photonics in the next 2-3 years? 100G possible? Aggregate or absolute? Pros & Cons?

Which sector would Silicon Photonics serve if the highest speed for eg is 25G?

Why not just keep increasing aggregate speed?

Why don't Infinera move from 4" to 6" to 8"?

Would Infinera and other InP makers stay at 4" perpetually? How confident InP would not have 8"?

Why don't Leti do W2W instead of C2W bonding?

Need to check with John Bowers what he thinks the industry is looking for.

John Bower's approach the right one to the industry?

54 Dr Lo explained during the CI that the information sought in the 4 and 7 June 2011 emails were "not extremely confidential", and that was why he had, in particular, prefaced the request in the 4 June 2011 email that the information was sought if Alex did not mind answering. When Dr Lo later found out from the deceased that Alex was not comfortable answering the questions posed in the two emails, he did not ask anything further. Dr Lo also explained that the information requested for in the two emails had more to do with the assessment of the market, rather than the assessment of any technology. He also said to the effect that some of the answers could be obtained from literature reports but would take time and experience to get.

55 When asked if the deceased might have perceived the two emails as trying to improperly obtain confidential information from Alex, Dr Lo frankly agreed and added that the deceased could have let him know if he had such concerns.

*The deceased's life from March 2012 onwards*

56 I now set out the facts in relation to the last few months of the deceased's life. The significant events during this period relate to his psychiatric condition and his contemporaneous complaints to his family.

*The deceased's psychiatric condition*

57 On 17 March 2012, the deceased visited Dr Clarence Yeo Sze Kin ("Dr Yeo"), a General Practitioner with the Killarney Family & Wellness Clinic Pte Ltd. The deceased complained of stress at work and that he had difficulty sleeping and coping. He also indicated that he had a past medical history of depression. Dr Yeo decided to refer the deceased to a private psychiatrist, Dr Nelson Lee Boon Chuan ("Dr Lee") from The Psychological Wellness Centre.

58 The deceased consulted Dr Lee on 4 April 2012. In the standard patient information questionnaire ("the Questionnaire") he was asked to fill in, the deceased indicated that his main problem was his "struggles with stress, anxiety, and depression due to work and life related issues". In response to the question of what he expected from this visit, the deceased wrote, "consultation on how to effectively treat condition". The deceased also indicated on the Questionnaire that a question that he would like to have answered was whether the symptoms that he was experiencing were due to physiological or psychological issues.

59 When Dr Lee interviewed the deceased, the deceased reported that he had a history of clinical depression in 2002, and that both his grandfather and uncle had also suffered from depression. The deceased reported that his mood had been considerably worse in 2002 but what felt worse now was the sense of

anxiety. He had poor sleep with early morning awakenings and also loss of appetite. His concentration had decreased and his energy levels were affected. The deceased also had a lot of anxious thoughts which were difficult to control. However, the deceased did not feel that life held no meaning nor were there any suicidal ideations expressed. The deceased reported that his mood state was not as bad as it was in 2002 but he was worried that it would deteriorate.

60 After examining the deceased, Dr Lee diagnosed the deceased as suffering from a relapse of his depression with a significant component of anxiety. Dr Lee further clarified during the CI that the deceased's situation was of moderate severity. The deceased was prescribed Lexapro, an anti-depressant, at 5 mg at night for the first week and this was titrated up to 10 mg (the therapeutic dose) from the second week for another two weeks. The deceased was therefore prescribed a total of eighteen Lexapro (10 mg) tablets which had the letters "EL" on them and eight Lexapro (5 mg) tablets which had the words "EK" on them (collectively, the "Prescribed Lexapro Tablets"). The deceased was to return to Dr Lee for a review after three weeks but he did not turn up then, or any time thereafter.

*The deceased's complaints to his family*

61 According to Richard Todd, in the months before the deceased's death, the deceased had constantly made statements that seemed to depict that his life was in some form of danger. The deceased would also mention how he was afraid he would never see his parents again. Richard Todd was alarmed and told him to keep in touch with them. The deceased told his parents that he would call them every week, and that they were to call the US Embassy immediately if they did not hear from him. The deceased's parents were



concerned and told him to return home. Sometime in June 2012 before his death, the deceased received a job offer from Nuvotronics LLC (“Nuvotronics”) in Virginia. He had also asked his family to postpone Father’s Day and Dylan Todd’s 21<sup>st</sup> birthday celebrations until he returned to the US.

62 Richard Todd last spoke to the deceased on 18 June 2012 when the deceased called him. The deceased expressed his excitement to return to the US and also emailed Richard Todd to ask him for bank information so that he could wire his money from Singapore back to the US. Richard Todd arranged for the deceased to transfer his money to Richard Todd’s mother’s bank account, but the deceased never made the transfer.

***The deceased’s resignation from the IME***

63 On 2 March 2012, the deceased verbally informed Dr Lo of his intention to resign from the IME, citing the reason that he missed his home in the US. When Dr Lo asked the deceased if he had found a new job, the deceased said that he had not. In view of this, as well as the fact that the deceased’s performance bonus would not be payable if he were to tender his resignation before May 2012, Dr Lo suggested that the deceased reconsider his intention to resign. Dr Lo also offered to be the deceased’s referee and advised the deceased not to feel pressured about his intention to resign from the IME as it was common to resign in this industry. On 3 March 2012, the deceased emailed Dr Lo confirming his intention to resign. Dr Lo replied saying that he understood the deceased’s decision and informed him that he could withdraw his decision to resign anytime.

64 After receiving his performance bonus of \$22,568 in April, the deceased formally tendered his resignation on 2 May 2012. As the terms of the deceased’s employment contract required him to serve two months’ notice to

the IME, his last day (also taking into account his leave entitlement) was on 22 June 2012.

65 On 18 June 2012, the deceased went for his exit interview conducted by Ms Ong Wei Pyng (“Wei Pyng”), a Human Resources Officer in the Human Resource Department at the IME. The IME conducts an exit interview for all employees who wish to resign so as to better understand their reasons for leaving the IME. After the deceased filled up a standard Exit Interview Form, Wei Pyng interviewed the deceased. From the interview, Wei Pyng gathered that the deceased wished to resign from the IME because he missed his family. The deceased also indicated that he had already found in a job in the US but had yet to decide if he wanted to accept it, and that he was scheduled to leave for the US on 26 June 2012.

66 Under the section “Growth Opportunities” in the Exit Interview Form, the deceased had indicated, “It takes a long time for promotions”. Wei Pyng asked the deceased if he had been looking forward to a promotion at the IME. The deceased replied in the affirmative and stated that he had not been promoted. Wei Pyng then explained that based on the IME’s promotion policy, the deceased would only be eligible for a promotion if he were to remain at the IME for one more year and receive a grading of “4” in his second year at the IME. The deceased appeared to understand and accept this but gave no indication that he wished to withdraw his resignation.

67 Under the section “Morale” on the Exit Interview Form, the deceased had written, “People can feel pressured and overworked”. When asked to elaborate on this, the deceased said that he felt that there was a lot of paperwork to complete and that he often had to work late to complete such

paperwork. Wei Pyng explained to the deceased the necessity of the paperwork and the deceased nodded his head, indicating that he understood.

68 Wei Pyng further asked the deceased about his working relationship with his colleagues. The deceased informed her that his colleagues were supportive and friendly. Of his direct supervisor, Dr Lo, the deceased wrote on the Exit Interview Form, “good manager, cared about our well being, involved in project”. At the end of the exit interview, Wei Pyng asked the deceased if he had any other issues or questions that he would like to raise. The deceased replied in the negative. The interview ended thereafter.

***The final days of the deceased’s life***

69 On 21 June 2012 (*ie*, the second last day of the deceased’s work at the IME), one of the deceased’s colleagues from the SAM Group, namely Mr Vincent Pott (“Vincent”), coincidentally bumped into the deceased at an Indian restaurant near the IME and they had lunch together. Vincent noticed that the deceased was not in the mood to talk and got the feeling that he was disturbing the deceased by spontaneously joining the deceased at the table where he had already started his lunch alone. Vincent felt like he had imposed on the deceased and that the latter would rather be alone. The deceased also excused himself about three to four times to go to the corridor at the back of the restaurant. Vincent was unable to tell what the deceased was doing when he went to the back of the restaurant. The deceased finished his food quickly and left first.

70 On the night of 21 June 2012, the deceased attended a farewell dinner at Sakura restaurant in Clementi organised and attended by the GaN Group (excluding Dr Lo). At this dinner, the deceased expressed regret working in the field of GaN as he did not have too much experience in this field. Yuan Li

noted that the deceased seemed unhappy about this. On the other hand, Weizhu gave evidence that the deceased appeared normal to her.

71 On 22 June 2012 (*ie*, the last day of the deceased's work at the IME), the deceased went for a farewell lunch attended by the wider group of about 20 of the deceased's colleagues at the IME (including those from the SAM and MEMS Group) at an American restaurant in Pasir Panjang. The deceased was seated somewhere in the middle of the group. Vincent (who was seated next to the deceased) commented that the deceased was quiet and appeared concerned. Ilker (who was seated some distance away from the deceased) sensed that the deceased was unhappy. Lawrence (who was seated some distance away from the deceased), did not notice anything unusual about the deceased's behaviour. Timothy (who was seated at one end of the table) noticed the deceased was more of his usual self as he was smiling throughout the lunch. Jeffrey commented that the deceased looked less stressed and more relaxed. After having their meal, the deceased's colleagues offered to pay for the deceased's lunch but he declined the offer, so the bill was split equally amongst all of them. After that, all of the attendees, including the deceased, went back to the IME.

72 After the farewell lunch on 22 June 2012, Luis Montes invited the deceased to dinner that night with his other friends. The deceased said that he would think about it. That same day, sometime after 6 pm, the deceased informed Luis that he was unable to join them. He did not give any reasons.

73 On 23 June 2012, sometime after 5 pm and possibly close to 6 pm, Luis Montes went over to the deceased's apartment as he had made an appointment with the deceased to look at the furniture that the deceased would be leaving behind when he returned to the US. To the best of Luis Montes'

recollection, the deceased appeared normal. He told the deceased that he would visit him in California as he wanted to learn how to surf, to which the deceased replied “okay”. Luis Montes eventually decided not to buy the furniture. About half an hour later, Luis Montes left with the deceased to a nearby coffeeshop to have a beer as the deceased had nothing in his apartment to serve him. The two of them had a little debate about whether GaN technology or CMOS technology (which Luis Montes was working on at that moment) was better. According to Luis Montes, the deceased was unclear as to whether he wanted to continue working in the GaN field or if he wished to work on something else. The deceased and Luis Montes parted ways sometime at about 7 pm after finishing their beer.

## **THE EVENTS SURROUNDING THE DECEASED’S DEATH**

### ***Events on 24 June 2012***

#### ***The discovery of the deceased’s body***

74 On 24 June 2012 at 8.33 am, and after not hearing anything from the deceased since 20 June 2012, Shirley sent a text message to the deceased asking him if he was alright. As she received no response to that text message, Shirley called the deceased sometime between 1 and 2 pm. There was no response.

75 At about 4.30 pm, the deceased’s neighbour who resided at the only other apartment in the second level of the property, namely, Mr Michael William Goodwin (“Michael”), reached home after returning to Singapore from an overseas trip. The common door leading to both units on the second floor of the property (“the common door”) was locked. Michael used his key to unlock the common door and closed it behind him, without locking it. He

then went into his own apartment. At about 5.33 pm, Michael sent a text message to the deceased asking him if he had changed the internet password to their shared internet account as he could not access the internet. There was no response. Michael then went over to knock on the door of the deceased's apartment, which was closed. There was no response. Michael returned to his apartment and closed his door.

76 At about 6 pm, Shirley sent a text message to the deceased asking him what was going on and informing him that she would go to his apartment if she did not hear from him. She received no response and thus went to the deceased's apartment sometime after 6 pm.

77 Upon arriving at the second level of the property, Shirley found the common door shut but unlocked. She opened the common door and found the main door to the deceased's apartment ("the main door") also shut but unlocked. All the lights in the deceased's apartment were switched off, except for the lights in the master bedroom, which she could see from under the shut master bedroom door. The master bedroom door was unlocked. Shirley entered the master bedroom, and saw, to her left, the deceased's body hanging from a strap suspended from the top of the shut master bedroom toilet door. The deceased's body was in an upright position, leaning forward, with his back against the master bedroom toilet door. His face was white, while the area between the deceased's elbows to his fingers and the area between his knees and his toes were purplish in colour. There was hardened mucus coming out from the deceased's nose. There was a wooden chair approximately 1.5 metres in front of where the deceased's body was hanging. The chair was facing the master bedroom toilet door. The deceased's laptop computer (later identified to be a 'Hewlett Packard' laptop computer ("the HP Laptop")) and

his mobile phone (later identified to be a 'HTC' Desire 8181 mobile phone ('the HTC mobile phone')) were on the bed.

78 Upon seeing this scene, Shirley screamed and ran out of the deceased's apartment towards the staircase landing. This alerted Michael, who came out of his apartment. Shirley asked Michael to check the deceased's apartment to confirm what she had just seen. Michael did not do so as he assumed that something bad had happened to the deceased and he did not want to see the deceased's body. Michael went down to the ground floor of the property. Shirley refused to follow him. On Michael's request, one Aw Xiuju, who was at the bridal boutique located at the ground floor of the property, called the police. This call, made at 6.47 pm, formed the First Information Report ('FIR'), the contents of which were as follows:

THERE IS A WOMAN SCREAMING AND CRYING FROM THE  
SECOND FLOOR.

79 Meanwhile, Shirley went back to the deceased's master bedroom and shook his body back and forth from the front for a few seconds to ascertain if he was dead or alive. The deceased's body was heavy and did not swing when she shook it.

*The arrival of the police*

80 In response to the FIR, Staff Sergeant Ang Yew Hua ('SS Ang'), Special Constable Muhammad Danial bin Mohammed Noh ('SC Danial') and Special Constable Corporal Muhamad Yussof bin Muhamad Hussain ('SC/CPL Yussof') arrived at the property at about 6.57 pm. They saw Shirley seated on the stairs at the second level of the property, crying. Shirley identified herself and informed them that the deceased had hanged himself.

81 SC/CPL Yussof was directed to standby at the ground floor of the property. SS Ang and SC Danial entered the deceased's apartment. SS Ang checked the deceased's body for a pulse and found none. At about 7 pm, SS Ang called for an ambulance and broadcasted a message on the police radio for further police assistance.

82 More police officers arrived at the scene shortly. In the police officers' assessment, there were no signs of foul play. This assessment was, at this stage, made on the basis of the following factors. Firstly, there were no tampering marks on the main door and the master bedroom door. Next, there were also no signs that a struggle and/or ransack took place. Shirley had informed the police officers that the deceased was packing to return to the US. This would explain the boxes and clothes lying around in the living room of the deceased's apartment. The furniture in the living room and the master bedroom were in place. Nothing was broken. Furthermore, the deceased's valuables were intact as evidenced by the presence of his HP Laptop, HTC mobile phone and wallet (containing cash, credit cards and other personal cards) in the apartment. There was also no blood found anywhere in the deceased's apartment and no visible sign of injury or blood was found on the deceased's body.

83 Specifically in relation to the scene in the master bedroom, the police officers noted the following details in addition to those also noted by Shirley (see [77] above). There was a small white towel interposed between the deceased's neck and the black strap which he was hanging from. The deceased's feet were flat on the bedroom floor. The wooden chair was placed on a larger white towel. The air-conditioning in the master bedroom was switched on. There was also a stack of "Post-It" notes on the television



console. The first note on the “Post-It” pad (“the 1<sup>st</sup> Post-It Note”) contained the following words in handwriting:

Please do not enter. Please call the police

The second note on the “Post-It” pad (“the 2<sup>nd</sup> Post-It Note”) contained the following words in handwriting:

Password: UzcØsØb5

84 One of the police officers present, Woman Staff Sergeant Sabrina Binte Bohamed (“WSS Sabrina”), called Assistant Superintendent of Police Tan Jun Wei (“ASP Tan”) and informed him of the situation. ASP Tan directed that the deceased’s body be brought down from its hanging position and that the black strap be cut at a point above the noose around the deceased’s neck. Thereafter, WSS Sabrina passed a pair of scissors that she found in the kitchenette to Special Constable Sergeant Dennis Soh Guan Huat (“SC/SGT Soh”), and went out of the deceased’s apartment to interview Shirley. Shirley told WSS Sabrina about the circumstances surrounding her discovery of the deceased’s body. Shirley also informed WSS Sabrina that the deceased could not cope with the stress at his workplace and that he had just resigned from his job and was due to return to the US.

85 At about 7.11 pm, two paramedics from the Singapore Civil Defence Force arrived at the scene. SC/SGT Soh took two photographs of the deceased on his mobile phone whilst the deceased was still in the hanging position, before cutting the black strap above the noose with the pair of scissors that WSS Sabrina had passed to him. Thereafter, the paramedics and the police officers present helped to bring the deceased’s body down from its hanging position. One of the police officers, Corporal Muhammad Shammer bin Mohamed Hassan (“CPL Shammer”), moved the wooden chair (which was

initially about 1.5 metres from the toilet door) further back towards the centre of the master bedroom, so as to make space for the deceased's body. The deceased's body was rotated by 180 degrees and placed on the master bedroom floor, such that his feet were near the master bedroom toilet. One of the paramedics, namely Staff Sergeant Low Pey Yun ("SS Low"), noted that the deceased's body was stiff and there was blood pooling at his extremities on both hands and both legs. She found no visible signs of injury. She performed an electrocardiogram test, established that the deceased was dead, and pronounced him dead at about 7.20 pm.

*The police investigations at the scene*

86 At about 7.56 pm, Sergeant Muhammad Khaldun bin Sarif ("IO Khaldun"), Senior Station Inspector Rayme Darman bin Ariff Koh ("SSI Rayme"), Woman Sergeant Rajina Sharma d/o Rajandran ("W/SGT Rajina") and police photographer Corporal Firdaus bin Tahir ("CPL Firdaus") (collectively, "the investigation team") arrived at the property. According to IO Khaldun, SSI Rayme and W/SGT Rajina, all of them wore gloves just as they entered the deceased's apartment. On entering the deceased's apartment, they noted the state of the deceased's apartment as described earlier in [82] above.

87 W/SGT Rajina was instructed to interview Shirley who was outside the deceased's apartment. IO Khaldun and SSI Rayme examined the deceased's body (which had already been brought down onto the floor) and found no visible signs of injury and no bloodstains, cuts, tears or other signs of struggle on the deceased's clothes.

88 IO Khaldun and SSI Rayme observed that the HP Laptop on the bed was on hibernation mode and the HTC mobile phone was on standby mode

and connected to the HP Laptop through a Universal Serial Bus (“USB”) cable. A laptop computer bag lying under the bedside table was found to contain two thumb-drives, one hard-disk drive (“the HDD”) and one IME diary belonging to the deceased.

89 SC/SGT Soh approached IO Khaldun to show him the two photographs of the deceased in the hanging position that he took using his mobile phone before he cut the strap above the noose. IO Khaldun instructed SC/SGT Soh to send the two photographs to him and to delete them thereafter as he did not want the photographs to be circulated in the public domain. IO Khaldun subsequently received the two photographs via the “Whatsapp” application.

90 IO Rayme assessed that the password on the 2<sup>nd</sup> Post-It Note must have been left there for a reason. He entered the password on the deceased’s HP Laptop and successfully managed to log in. According to SS Ang, SSI Rayme did not wear gloves at that time, but SSI Rayme and IO Khaldun confirmed that SSI Rayme did wear gloves. Upon logging in, a Portable Document Format (“PDF”) file appeared containing what seemed to be a suicide note (“the PDF Note”). The first page of the PDF Note read as follows:

Dear Everyone,

I am very sorry it has come to this. I just want to make it clear that I do not blame anyone for my condition except myself. People at work have been patient and kind to me and have given me ample opportunity to succeed. My parents and family have given me more support than I could ask for. My friends in Singapore have been very kind and understanding and have tried to help me through this. And my girlfriend Shirley has been always loving and supportive even when it was no fun to hang out with me. She has been the most constant source of support, love, and friendship to me in Singapore and without her I wouldn’t have made it this long.

I am so sorry it has come to this but I feel I am just a burden to those around me. I have tried to get jobs in the U.S. but I know I am not capable of fulfilling the duties required of me. I hope that you can remember the good things about me, about how I was loving son, grandson, brother, nephew, cousin, friend, boyfriend, co-worker and teammate. I had a few successes in life, so please try to remember my actions by those successes and not by the failure I have succumbed to.

I understand that this is a crime in Singapore. But for the sake of my family, I ask that you please be lenient and allow my family the ability to decide on what to do with me. If they wish to bring me back to the U.S., I ask you to please allow them to do so. I also ask that you allow them access to my bank account to pay for any expenses that arise. If you allow me to, I ask that my family decides what to do with any remaining money. I suggest giving the money to charity.

I am very sorry for the pain and trouble this causes. I never wanted to hurt anyone and I hope that you forgive me.

Love to all,

Shane Todd

Parents: Richard Todd and Mary Todd

The second page of the PDF Note read as follows:

Dear Mom and Dad,

I just want to let you know that I am so thankful for having you as my parents. You have given me the most love, patience, and support that any son could ask for. As you know I have been going through a difficult time and I am facing problems that I don't know how to solve. You both have given me such good advice but I don't have the strength or ability to follow through. I want to reiterate that none of this is your fault and despite the things I have said to you in the past, I am the only one to blame for my problems. I am so proud of the things you have built and the lives you have touched through your church and ministry. I hope that you understand that I am so sorry for the pain this causes. I just know how much of a burden I will be to you in the future so I feel it is better to do this now rather than wait until I have caused more damage.

You gave me so many great memories in life, spending time on the lake in Montana, going to the beach to drink Shirley Temples, bean dip at happy hour, fishing and snorkeling in the Keys, going to my countless sporting events, barbecues and family functions in our house on the hill, and going to

church on Sundays. I hope that you cherish our good memories together. I love you very much.

Dear John, Chet, and Dylan,

I am so proud of the great men you guys have become. You guys are my best friends. I hope that you will always keep family close and have faith that God will bless your lives. I love you very much.

Dear Shirley,

You have been an angel to me. I know this will cause you great hurt but I know that you will be able to stay strong and rely on God to help you heal from this. You are so talented in so many ways and have a very bright future ahead of you. Please remember the good times we had and know that you are the best thing that happened to me while I was here in Singapore. I love you.

Dear Friends,

I thank you all for being a part of my life. Please remember the good times we had.

Again I am sorry and I hope you all forgive me.

Love,

Shane

91 IO Khaldun checked the HTC mobile phone, which was already switched on, by reviewing the call register and text messages in the phone. He did not find anything relevant to the case. IO Khaldun decided to leave the HTC mobile phone switched on as he wanted to monitor the calls or messages which might be useful in his investigations.

92 IO Khaldun tried to open the door of the master bedroom toilet but found it locked. He found a set of keys on the dining table in the living room and managed to open the master bedroom toilet door using one of those keys. Upon opening the master bedroom toilet door, IO Khaldun and SSI Rayme saw that the other end of the black strap had a plastic buckle attached to it.

There were three indentation marks on the top edge of the door, one of which coincided with the position of the black strap.

93 IO Khaldun and SSI Rayme then directed CPL Firdaus to take photographs of the scene and the body of the deceased. SSI Rayme further directed CPL Shammer to cut the black strap around the deceased's neck. SSI Rayme called his Overall-in-Charge, Inspector Gurcharn Singh ("OC Gurcharn") to inform of the situation. SSI Rayme relayed to IO Khaldun OC Gurcharn's instructions to inform the US Embassy. IO Khaldun also interviewed Shirley.

94 The investigation team did not take deoxyribonucleic acid ("DNA") swabs at the scene, nor did they dust for fingerprints.

95 At the conclusion of the investigations at the scene, IO Khaldun seized the following items as exhibits:

- (a) the black strap;
- (b) the small white towel around the deceased's neck;
- (c) the HTC mobile phone;
- (d) the USB Cable;
- (e) the stack of "Post-It" pad (including the 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes);
- (f) the deceased's IME diary;
- (g) the HP Laptop; and
- (h) the HP Laptop power adaptor.

96 According to IO Khaldun, the following items were not seized as exhibits but were brought back by him to the Central Police Division for safekeeping:

- (a) the laptop computer bag containing two thumb-drives and the HDD; and
- (b) the deceased's wallet (with the contents within).

97 SS Ang was directed to activate the police hearse, and the investigation team left the scene at about 9 pm.

#### *Further events*

98 After leaving the scene and at about 10 pm, IO Khaldun informed Mr Craig Bryant ("Mr Bryant"), the Consul of the US Embassy, *via* telephone, of the deceased's passing. IO Khaldun was told that someone from the US Embassy would be present at the mortuary the following morning. That same night, IO Khaldun prepared a report briefly stating the circumstances in which the deceased had been found dead in his apartment ("the Unnatural Death Report"). The Unnatural Death Report was to be used by the Field Coroner during the viewing of the deceased's body at the mortuary the following day to assess if a post-mortem examination was necessary. IO Khaldun also drafted another report containing the same details as those in the Unnatural Death Report ("the Draft Embassy Notification"). The Draft Embassy Notification was subsequently sent to Ms Traci L. Goins ("Ms Goins"), the Vice Consul of the US Embassy, *via* email, on 3 July 2012. There was no mention at all of holes, bolts, ropes and/or pulleys in the Unnatural death Report or the Draft Embassy Notification.

99 Meanwhile, Shirley relayed the news of the deceased's death to Mary Todd, who, in turn broke the news to the rest of the deceased's family.

***Events on 25 June 2012***

100 On 25 June 2012 at about 9 am at the mortuary, the deceased's body was identified by Shirley and IO Khaldun in the presence of Ms Goins and the Field Coroner. The Unnatural Death Report was tendered to the Field Coroner, and the Field Coroner ordered that a post-mortem examination be carried out. Thereafter, IO Khaldun further interviewed Shirley for more information about the deceased.

***Events on 26 June 2012***

101 In the early morning of 26 June 2012, Richard, Mary, John and Dylan Todd arrived in Singapore. They met Ms Goins and informed her about their suspicions of foul play based on what the deceased had told them in the months before he died (see [61] above). Ms Goins advised them to tell the Singapore police officers everything that they knew or suspected.

***Events on 27 June 2012***

102 On 27 June 2012, at about 11.30 am, Richard, Mary, John and Dylan Todd went to the Central Police Division. Richard and Mary Todd, together with Ms Goins, met IO Khaldun in one room, while John and Dylan Todd were in another room with W/SGT Rajina. According to Richard and Mary Todd, IO Khaldun told them that the deceased had used an electric screwdriver to drill holes in the master bedroom toilet walls, and then screwed bolts into the wall, to which he attached ropes and pulleys. The rope was then supposedly wrapped around the toilet seat and slung over the master bedroom toilet door. The deceased fashioned a noose, put it around his neck, stood on a



chair on the outside of the toilet door facing the bedroom and jumped off the chair, killing himself by asphyxia. IO Khaldun denied this. He gave evidence that he had read out from the Unnatural Death Report which was before him, and there was no mention of holes, bolts, ropes, and/or pulleys stated therein. (I pause here to note that State Counsel had, through the US Embassy, tried to contact and request Ms Goins (who is no longer in Singapore), to give evidence at this CI since she was a key witness of fact as to what actually transpired during this meeting on 27 June 2012. However, the US Embassy informed that Ms Goins was not able to assist and no reasons were given as to why she was unable to do so.)

103 IO Khaldun then passed the PDF Note to the deceased's parents. W/SGT Rajina entered the room at this point in time and witnessed this. The deceased's parents did not believe that the deceased had written the PDF Note. Thereafter, IO Khaldun proceeded to record statements from the deceased's parents.

104 At about 3 pm, the deceased's body was identified by his parents at the mortuary in the presence of Ms Goins. W/SGT Rajina and IO Khaldun then accompanied the deceased's parents back to their hotel. Before they parted, IO Khaldun made an appointment to meet the deceased's parents the next day (*ie*, 28 June 2012) at 5 pm to record their conditioned statements and to return the deceased's personal belongings to them.

105 Later that day, IO Khaldun went to the deceased's apartment to seize a "Gateway" laptop computer ("the Gateway Laptop") and its power adaptor, which were on the TV console in the deceased's master bedroom. When IO Khaldun returned to his office, he accessed the Gateway Laptop to check if it contained any information that could assist him in his investigations.

According to IO Khaldun, he also connected the HDD found in the deceased's laptop computer bag (which he had brought back with him for safekeeping on 24 June 2012), to his work laptop computer, a HP Elitebook 2540p laptop computer ("IO Khaldun's HP Work Laptop"). He opened several folders and documents contained in the HDD to check if it contained any information that could assist him in the investigations, but did not edit or delete any files. IO Khaldun also checked the two thumb-drives found in the Laptop bag by connecting it to his HP Work Laptop. Having found no useful information in the HDD and the two thumb-drives, IO Khaldun decided that these items should be classified as the deceased's personal belongings, and be returned to his parents.

***Events on 28 June 2012***

106 On 28 June 2012, at about 5 pm, IO Khaldun met with the deceased's parents and Ms Goins at the Central Police Division. He recorded conditioned statements from the deceased's parents. Thereafter, IO Khaldun spoke with OC Gurcharn, and they decided that the deceased's personal belongings should be returned to his parents. The relevant portions of the Acknowledgement Slip dated 28 June 2012, to which Mary Todd affixed her signature to the bottom, is reproduced below:

I, Mary Brooks Todd ... hereby acknowledge receipt of the below mentioned items of:

- 1) One (1) laptop bag
- 2) One (1) wallet containing the following items:
  - a. One (1) World USAA Mastercard
  - b. One (1) Adult ez-link card
  - c. One (1) USAA Cash rewards debit mastercard

- d. One (1) SMRT Citibank Visa Platinum
  - e. One (1) Premier miles Citibank Visa signature card
  - f. One (1) Citibank ATM Card
  - g. One (1) California driver license
  - h. One (1) namecard
  - i. One (1) 24 hour fitness USA card
  - j. Cash amounting to S\$25/- (2 pieces S\$10/- and 1 piece S\$5/-)
- 3) Two (1) [sic] thumbdrives
  - 4) One (1) Harddisk

From IO Muhd Khaldun of Central Police Division, 1B GIS 1  
on 28/6/2012 at 6.45 pm.

107 Mary Todd denied receiving the HDD (which was the fourth item listed in the Acknowledgement Slip reproduced above) from IO Khaldun at this meeting. They claimed that they had found it in the deceased's apartment instead (see [115] below).

### ***Events on 29 June 2012***

108 On 29 June 2012, Richard, Mary, John and Dylan Todd went to the deceased's apartment. Jeffrey, Timothy, Don, Ilker and Magarita were there as well to visit the deceased's family. According to the Todds, they felt confused as they saw no evidence of holes, bolts, ropes and pulleys in the master bedroom toilet, contrary to what IO Khaldun had allegedly told them on 27 June 2012 (see [102] above). Mary Todd also found some medication in the deceased's apartment and called IO Khaldun.

109 IO Khaldun and OC Gurcharn went to the deceased's apartment. Upon their arrival, Mary Todd handed to IO Khaldun an unlabelled white bottle ('the Medicine Bottle') containing two tablets with the words "EK" on them ('the EK Tablets') and 17 white tablets with the word "EL" on them in five blister packages marked "Lexapro" ('the EL Tablets'). IO Khaldun seized the EK and EL Tablets as exhibits. Mary Todd also handed a document containing flight details and the name card of Dr Lee. Mary Todd informed IO Khaldun that she had called Dr Lee earlier and he had informed her that he had seen the deceased on one occasion and the deceased did not report any suicidal tendencies to him.

110 IO Khaldun asked Mary Todd to show him where she had found the Medicine Bottle. Mary Todd brought him to the master bedroom toilet and indicated to the right side of the cabinet on top of the sink. IO Khaldun acknowledged this. The events that transpired immediately thereafter are disputed, so I will set out the parties' version of events separately in the paragraphs below.

111 I turn first to set out Mary Todd's version of events. According to her, IO Khaldun denied all the details that she had vividly remembered him reading to them on 27 June 2012 (see [102] above). IO Khaldun then told her that she must have misunderstood what he had said. Mary Todd was puzzled and asked IO Khaldun for a transcript of what he had read previously, so that she could compare what she remembered with the physical evidence. IO Khaldun explained that he could not do so because investigations were still ongoing. Mary Todd then called Ms Goins and asked her if she had the same understanding as she did since Ms Goins was present at the meeting on 27 June 2012. According to Mary Todd, Ms Goins agreed. According to Mary Todd, IO Khaldun then tried to explain the discrepancies by using three

different scenarios of how the deceased could have hung himself, insisting that the deceased had used a wide strap like those found on computer bags, to hang himself. John Todd tried to re-create those scenarios, but it became obvious that none of them were feasible. Mary Todd asked IO Khaldun if the police had taken photographs of the deceased hanging from the door, and IO Khaldun said that they had not taken pictures of him hanging because they were more worried about saving his life. This did not make sense to Mary Todd because the deceased had been dead for at least one or two days when he was found. Mary Todd also stated that the Todds were not allowed to see the photographs taken of the deceased's body when it was taken down. Mary Todd had many questions that IO Khaldun could not answer. IO Khaldun and OC Gurcharn eventually left with the promise that they would call them back to explain what really happened. However, IO Khaldun and OC Gurcharn did not get back to them.

112 IO Khandun disputed Mary Todd's version of events. His account is as follows. According to IO Khaldun, Mary Todd told him that he had mentioned about nuts, bolts and pulleys in the first meeting that they had on 27 June 2012 (see [102] above). He shook his head and reiterated the description that he had read out from the Unnatural Death Report on 27 June 2012. Mary Todd was in disbelief and emotional. John Todd took a hairdryer found in the master bedroom and hung the plug over the master bedroom toilet door. He then closed the door and tried to pull the wire. IO Khaldun confirmed in court that he made no reference to nuts, bolts and/or pulleys at all at this meeting. He explained that he had no reason to do so, because as was evident from the photographs taken at the scene, there were no nuts, bolts and/or pulleys involved in the deceased's death. IO Khaldun did not say anything else to the deceased's parents as investigations were still ongoing, and left the deceased's apartment after about 10 to 15 minutes.

113 Timothy was in the master bedroom when the Todds were talking to IO Khaldun and OC Gurcharn. Timothy gave evidence that there was no reference to screw-drivers, nuts, bolts and/or pulleys during the conversation. He only remembered that one of the deceased's brothers was trying to paint a picture of what had happened, and that IO Khaldun and OC Gurcharn were just standing around. He recalled that Mary Todd was quite emotional, and that she looked confused and was on the verge of a breakdown, although he could not recall what she said. Dylan Todd was also in the master bedroom during this time. He stated in his conditioned statement that his mother was very upset and that he remembered wondering if his mother was not managing her anger well, but decided that she was justified because IO Khaldun could not provide her with the answers that she sought.

114 Jeffrey and Don were outside in the living room when the Todds were conversing with IO Khaldun and OC Gurcharn in the master bedroom. According to Jeffrey, he could hear the Todds, especially Mary Todd, speaking most of the time. Don gave evidence to the effect that he heard IO Khaldun trying to explain to the Todds what had happened. Don also remembered that Mary Todd had sounded very emotional and upset, and that Mary Todd had yelled that she could not understand what was going on and that she wanted somebody to explain to her. Don also said that Mary Todd had told him that she had not slept in many days.

115 After IO Khaldun and OC Gurcharn left, the Todds spent the rest of the day packing up the deceased's personal belonging. According to Richard and Mary Todd, they found the HDD (which they mistook as a speaker until July 2012 (see [118] below)) in the process of packing and they "put it in the bag".

***Events on 30 June 2012***

116 On 30 June 2012, Richard, Mary, John and Dylan Todd hosted a get-together of the deceased's friends at a hotel. According to Richard Todd, about 20 or so friends attended. He did not specify the names of the attendees in his conditioned statement. According to Jeffrey, the following people attended this get-together: (a) himself; (b) Dr Lo; (c) Dr Tsai; (d) one Wendy; (e) Ilker; (f) Timothy; (g) Margarita and her husband; (h) Luis Montes; and (i) one Lynn Khine, her spouse, and their baby. Jeffrey confirmed that all of them, including Luis Montes, had the opportunity to speak to the deceased's parents. Timothy could not recall if Dr Lo and Luis Montes were there, but he recalled seeing Shirley in addition to most of the rest identified by Jeffrey. Luis Montes confirmed that he was present at this get-together and that he had spoken to the deceased's parents to express his condolences. I pause to briefly mention that this was one of the reasons why I found that Luis Montes could not be said to have been a surprise witness to the NOK (see [12] above).

***Subsequent action by the Todd family***

117 On 4 July 2012, the deceased's body arrived at the Todd Memorial Chapel in Pomona, California. Pursuant to Richard Todd's instructions, the owner of the mortuary directed his employee to take photographs of the deceased's body. These photographs are hereinafter referred to as "the 4 July 2012 Photographs". The embalmer and two doctors present at the memorial service commented on alleged bruises on the deceased's hands.

118 Sometime later in July 2012, Richard retrieved the HDD and plugged it into his computer to verify that it was a hard-disk drive. He did not open any files. On 23 July 2012, Richard Todd passed the HDD to John Todd to take it to one Mr Ashraf Massoud ("Mr Massoud"), a police officer with the State of

California, US, with over 14 years' experience in, amongst other things, computer forensics. On 24 July 2012, Mr Massoud received the HDD from John Todd. He later noted that the HDD was a Seagate Free Agent Go Hard Disk Drive with the Serial Number "2GE18WCK". Mr Massoud conducted a forensic examination on the HDD.

119 Sometime in September or early October 2012, Richard and Mary Todd forwarded the autopsy report and the toxicology report to Dr Adelstein, the Deputy Chief of Pathology at the Harry S Truman Veterans Hospital in Missouri, US, for him to give his opinion as to the cause of the deceased's death.

120 On 12 October 2012, the deceased's parents sent an email to IO Khaldun informing him that they had sent the HDD for forensic examination and that the results showed that someone had accessed the files contained therein on 27 June 2012, three days after the deceased was found dead.

***Subsequent action by IO Khaldun***

121 IO Khaldun subsequently dealt with the following items by either forwarding them to the Health Sciences Authority ("HSA") or the Technology Crime Forensic Branch of the Technology Crime Division, Criminal Investigation Department ("TCFB"):

S/n	Date of seizure	Item	Date of forwarding	Item forwarded to	Item forwarded for
1	24/6/12	Post-it pad (including 1 <sup>st</sup> and 2 <sup>nd</sup> Post-It Notes)	18/7/12	HSA	Handwriting analysis
2	24/6/12	Deceased's IME			



S/n	Date of seizure	Item	Date of forwarding	Item forwarded to	Item forwarded for
		diary			
3	24/6/12	Black strap	31/7/12	HSA	DNA analysis
4	24/6/12	Small white towel found around deceased's neck			
5	24/6/12	HP Laptop	31/7/12	TCFB	Forensic examination
6	27/6/12	Gateway Laptop			
7	24/6/12	HTC mobile phone	10/9/12	TCFB	Forensic examination
6	28/6/12	Medicine Bottle	18/9/12	HSA	Drug analysis
7	28/6/12	EK Tablets			
8	28/6/12	EL Tablets			
9	15/ 10/12	"ACER" Central Processing Unit ("the ACER CPU") from the deceased's work station at the IME	16/10/12	TCFB	Forensic examination

### ***Events in December 2012***

122 The deceased's parents flew to Singapore again in December 2012.

123 On 12 December 2012, the deceased's parents met with some of the staff from the IME. The police were present at this meeting. The deceased's parents asked the IME staff some questions relating to his work.

124 On 13 December 2012, a meeting was convened with the deceased's parents at their behest in the Central Police Division. Apart from the

deceased's parents and IO Khaldun, the following persons also attended this meeting:

- (a) Mr Bryant, the Consul of the US Embassy;
- (b) the Deputy Superintendent of Police Pannirselvam, Deputy Head Investigation, Central Police Division ("DSP Pannir"); and
- (c) Deputy Superintendent of Police Sukhdev Singh, Chief Investigation Officer, Central Police Division.

125 At this meeting, IO Khaldun queried if the hard-disk drive that the deceased's parents had sent for forensic examination (see [118] and [120] above) was the same hard-disk drive that he had returned to them on 28 June 2012. The deceased's parents maintained that IO Khaldun did not give them any hard-disk drive. IO Khaldun showed the deceased's parents the Acknowledgement Slip, but the deceased's parents maintained their position. They then asked IO Khaldun for a description of the HDD. According to Richard Todd, his assumption was that the hard-disk given to them, if indeed real, was a CD or a DVD. He asked IO Khaldun for the serial number, make and model of the HDD. IO Khaldun did not have those details. Richard Todd then asked IO Khaldun to describe the HDD. According to Richard Todd, IO Khaldun shrugged and said that it laid flat, was black, and maybe had a wire hanging out of it. Richard Todd informed him that this description was different from the HDD in question. According to IO Khaldun, he had told the deceased's parents that hard-disk drives were commonly black in colour and rectangular in shape. He had meant that to be a depiction of hard-disk drives in general, and not a specific description of the HDD that he had handed over to the deceased's parents on 28 June 2012.

126 On 27 February 2013, Superintendent Tan Chee Kiong, Head Investigation of the Central Police Division, wrote a letter to the FBI seeking the co-operation and assistance of the FBI to: (a) retrieve the HDD for the purpose of forensic examination; (b) extend the forensic examination report on the HDD to the Central Police Division thereafter; and (c) obtain the medical report of the doctor who treated the deceased for his bout of depression in 2002. (The court was informed during one of the pre-inquiry conferences with the parties that the medical report was illegible. Nonetheless, the inability to determine the contents of the medical report was immaterial since the deceased's depression in 2002 was not in dispute.)

127 On 5 March 2013, IO Khaldun sent his HP Work Laptop to the TCFB for forensic examination.

## **CAUSE OF THE DECEASED'S DEATH**

### ***The autopsy report***

128 An autopsy was performed on the deceased on 25 June 2012 at 9.30 am under the supervision of Dr Wee Keng Poh ("Dr Wee"), a Senior Consultant Forensic Pathologist at the HSA. Dr Wee has over 40 years of experience practicing forensic pathology. He estimates that he has conducted over 10,000 autopsies, out of which about 800 cases were cases of hanging.

129 Dr Wee's conclusion was that the cause of the deceased's death was *asphyxia due to hanging*. The key point that led to this conclusion was the ligature mark found on the deceased's neck. There was a near-circumferential ligature around the neck, running backward and upward on both the sides and the back of the neck, with the apparent highest suspension point at the right side of the back of the head, within the scalp hair. The ligature mark was 38

cm long with a 4 cm gap between the ends transversely at the right mastoid region of the head. Dr Wee found the ligature mark to be consistent with a ligature mark of hanging. Other than the ligature mark, there were no other external injuries found on the deceased. The autopsy did not reveal anything else remarkable. The post-mortem changes were consistent with death occurring about 6 to 12 hours before the discovery of the deceased's body at about 7 pm on 24 June 2012. That would place the time of the deceased's death between 7 am to 1 pm on 24 June 2012.

***Dr Adelstein's report dated 8 October 2012***

130 The NOK's appointed expert, Dr Adelstein, disagreed with Dr Wee's conclusion that the deceased's death was asphyxia due to hanging. Dr Adelstein has a degree in medicine and veterinary medicine. He is board certified in clinical and anatomical pathology, but is not board certified or formally trained in forensic pathology. At the time of Dr Adelstein's report dated 8 October 2012, he estimated that he had conducted autopsies for about 25 cases of hanging. At the time of Dr Adelstein's video disposition on 16 April 2013, he estimated that he had conducted autopsies for about 40 cases of hanging. When Dr Adelstein testified via video-link during the CI in May 2013, he said that he might have conducted autopsies for over 100 cases of hanging and that the previous estimates that he had given were low estimates.

131 In Dr Adelstein's report dated 8 October 2012, he initially took the view that the deceased was engaged in a fight and was killed by an encircling ligature, a process known as "garroting", resulting in his death occurring quickly. Thereafter, the deceased was suspended by a broader ligature in an attempt to obscure the original thinner ligature. Dr Adelstein reached this conclusion because, according to him:

- (a) The fact that the deceased's lungs were of normal weight indicated that he was likely unconscious within 15 to 30 seconds after the ligature was applied to his neck. This, in turn, would be consistent with garroting and not asphyxia due to hanging, since the deceased would have lost consciousness only after three to five minutes if he had hanged himself;
- (b) There were no petechiae in the deceased's eyes (*ie*, pinpoint haemorrhage caused by the capillaries in the eyes and upper eyelids breaking and oozing blood);
- (c) There was a broader ligature mark which obscured the original thinner ligature; and
- (d) There were suspicious bruises near the ligature mark, multiple blunt trauma injuries to both of the deceased's hands and an injury to the left side of the deceased's forehead, allegedly evidenced by the 4 July 2012 Photographs.

Dr Adelstein explained during the CI that he had based this report on Dr Wee's autopsy report and five of the 4 July 2012 Photographs. He confirmed that, at the time of his report, he did not ask the deceased's family when those photographs were taken. He also did not conduct another autopsy on the deceased.

***The experts' response to Dr Adelstein's report***

132 In view of the conflicting forensic opinion presented by Dr Adelstein, the State forwarded Dr Adelstein's report to Dr Wee and both Dr Wee's and Dr Adelstein's report to two expert witnesses from the US for their comment. The first expert witness was Dr Valarie J. Rao ("Dr Rao"), the Chief Medical

Examiner of the District 4 and parts of District 3 Medical Examiner's Office in Jacksonville, Florida, US. Dr Rao has been practising as a forensic pathologist for 32 years and has conducted autopsies for hundreds of cases of hanging. The second expert witness was Dr David R Fowler ("Dr Fowler"), the Chief Medical Examiner of the Office of the Chief Medical Examiner in the State of Maryland, US. Dr Fowler has been practising as a forensic pathologist for 22 years and has conducted autopsies for about 120 cases of hanging at his last count which was about 10 to 12 years ago. The autopsy photographs and toxicology report were forwarded to Dr Rao and Dr Fowler as well.

133 Dr Wee, Dr Rao and Dr Fowler individually disagreed with Dr Adelsten's conclusion in his report. Dr Wee maintained his position that the cause of the deceased's death was asphyxia due to hanging, a position which both Dr Rao and Dr Fowler fully agreed with. The details of their views are elaborated below.

134 According to Dr Wee, Dr Rao and Dr Fowler, the weight of the deceased's lungs was *not* indicative that the deceased had lost consciousness within 15 to 30 seconds and that his death occurred quickly. According to Dr Fowler, Dr Adelstein's assertion on the issue of the weight of the deceased's lungs was "not referenced in any literature" that he (*ie*, Dr Fowler) was aware of.

135 Next, Dr Rao and Dr Fowler wrote in their reports that the absence of petechiae around the deceased's eyes and face pointed towards hanging rather than garrotting as it is unusual to find petechiae in cases of hanging.

136 Dr Wee, Dr Rao and Dr Fowler opined that the alleged broader ligature mark that obscured the original thinner ligature mark was, in fact, not a ligature mark. That broader mark around the neck was consistent with the weave pattern of the small white towel that was under the black strap and secured around the deceased's neck, and was therefore also consistent with hanging. These three forensic pathologists also gave evidence to the effect that interposing a towel between the skin and the ligature minimises the pain during hanging.

137 Dr Wee, Dr Rao and Dr Fowler all disagreed with Dr Adelstein that the deceased had been garrotted, as there was no evidence of any internal injury to the neck, such as haemorrhage in the strap muscles or soft tissue of the neck and/or fracture to the hyoid bone and/or the thyroid cartilage, which one would normally expect to find in cases of garrotting.

138 In addition, Dr Wee, Dr Rao and Dr Fowler all disagreed with Dr Adelstein that there were suspicious bruises near the ligature mark and multiple blunt trauma injuries to both of the deceased's hands. According to them, the dusky hues on those areas were simply caused by post-mortem lividity (*ie*, the subsequent post-mortem oozing of blood out of the distended vessels into the dependent parts of the body).

139 The responses of Dr Wee, Dr Rao and Dr Fowler, as well as the photographs of the scene and the autopsy were forwarded to Dr Adelstein on 19 May 2013, before the CI.

***Dr Adelstein's evidence during the CI***

140 When Dr Adelstein gave his evidence *via* video-link during the CI, he changed his original opinion that was presented in his report dated 8 October

2012 and said that he was no longer of the view that the cause of the deceased's death was garroting, primarily because of the absence of internal injuries to the deceased's neck.

141 Dr Adelstein nonetheless maintained that the deceased was already dead before he was suspended from the ligature. Dr Adelstein surmised that the deceased must have died quickly from some other cause instead of the three to five minutes it would take for death to occur in a hanging because: (a) he would find pulmonary oedema and intraparenchymal haemorrhage causing the lungs of a deceased person to be heavier than normal in about 70% of hanging cases, but the weights of the deceased's lungs in the present case were normal; and (b) there were no petechiae observed around the deceased's eyes and face. Dr Adelstein also insisted that the marks on the deceased's hands, neck, forehead and ear as found in some of the 4 July 2012 Photographs were bruises evidencing that he had struggled against more than one attacker.

142 Dr Adelstein disagreed with the views of Dr Wee, Dr Rao and Dr Fowler as earlier expressed in their respective reports that the weights of the deceased's lungs were inconclusive. In Dr Adelstein's view, Dr Wee, Dr Rao and Dr Fowler "are not good observers of people who have been found hanging". He also disagreed with Dr Rao and Dr Fowler's views that the absence of petechiae was consistent with hanging, citing Werner U. Spitz & Daniel J. Spitz, *Spitz and Fisher's Medicolegal Investigation of Death: Guidelines for the Application of Pathology to Crime Investigation* (Charles C Thomas Publisher, Ltd, 4<sup>th</sup> Ed, 2006) ("*Spitz and Fisher*") for the proposition that petechiae would be present in 90% of cases of hanging.

143 Dr Adelstein also disagreed with the views of Dr Wee, Dr Rao and Dr Fowler that the marks on the deceased's hands, neck, forehead and ear, were



not bruises but simply signs of post-mortem lividity. When asked by State Counsel why Dr Wee, Dr Rao and Dr Fowler would fail to see what was to Dr Adelstein very obvious bruises, Dr Adelstein suggested that this was because they were financially motivated and/or wrong. Dr Adelstein also casted doubt on the professional competency of Dr Rao, with whom he had worked with before. The relevant portions of the transcript are reproduced below:

- Q. Why would they be wrong? Why do you think they failed to see the obvious?
- A. You know, I have no idea why people -- I do have this experience to tell you. That I have testified with a number of highly paid medical examiners and I'm not quite impressed by their judgment or their decisions. For instance, you might want to tell us you are paying your experts. I'm actually getting paid nothing. I have seen many people in fights and I've seen many people - - and I'd like to show you -- maybe this picture would be interesting. This is a picture taken --
- Q. Sir, before we get to your pictures -- we will come to your pictures, I assure you -- are you saying these four other doctors, they were not very good observers, is that what you said earlier?
- A. I will say this, that we differ a great deal in our opinion. I will also say this, that when I testified in the BA murders with the very finest medical examiner in the United States, her testimony was not considered valid because they were paid a lot of money.
- Q. Would it make a difference to you to know that Dr Rao and Dr Fowler are not being paid as well for their input?
- A. I think that's very honourable, and I'm pleased and surprised, thank you.
- Q. Would it change your view now, that money would have been a motivating factor?
- A. No, because I can actually tell you that some of these people have made -- Dr Rao, who is a lovely lady, came to Colombia University. The last diagnosis she made was a football player, who she said died of viral

meningitis, when he clearly died of heatstroke and (inaudible) and left me with an incredible mess to deal with in Colombia, Missouri, where I had to apologise to the president of the University of Missouri that mistakes were made. So I don't give any more credibility to famous medical examiners than I do to myself; they make mistakes.

...

Q. Are you saying you have worked with Dr Rao before --

A. Yes, I have and she's a very hard-working --

Q. -- and you are telling us she had, in your view, made a wrong diagnosis which left you a lot of trouble?

A. A wrong diagnosis and it took me six months to clean up after she left --

Q. And you would not have been very happy with her?

A. I was not -- no, I was not very happy with her and --

Q. Thank you, Dr Adelstein. We'll go on.

A. I mean, she actually considered me incompetent.

I pause here to state that State Counsel subsequently clarified in open court that while Dr Rao was not remunerated for her services in rendering an expert report, Dr Fowler had levied a consultation fee for the time he spent reviewing the autopsy report.

144 Dr Adelstein also postulated that the deceased could have been killed by: (a) a taser, which, in his opinion, "can be very effective" in causing death; or (b) a carotid armlock, where the carotids (*ie*, the arteries around the neck) are compressed causing unconsciousness in approximately three to four seconds. He conceded that there was no medical evidence to suggest these two possibilities, but maintained that these were nevertheless still possibilities as the "assassins were well trained in the art of killing people". He also said that

he had a unique appreciation of death threats because he had previously been threatened by the Japanese yakuza, and his son's lawyer who acted against the mafia was killed in Manila and it was ruled a suicide.

145 Dr Adelstein also explained that the deceased would not have committed suicide because, according to Dr Adelstein, a person like the deceased would usually commit suicide only if "he lost his girlfriend, which he did not, or he had some fatal illness, which he does not, or he can't get a job but he already has a job, or which he is going to jail for a long period of time, which he is not". Dr Adelstein knew that the deceased was suffering from depression and was given anti-depressants, but this fact did not have a bearing on his analysis. Dr Adelstein said that he did not take the deceased's psychiatric condition "very seriously" because, according to him, psychiatry is "not a real science".

***The experts' response to Dr Adelstein's evidence during the CI***

146 Dr Adelstein's new position was subsequently put to Dr Fowler and Dr Rao individually for their comment when they testified at the CI. They were also presented with the 4 July 2012 Photographs. Dr Fowler and Dr Rao individually disagreed with Dr Adelstein's new position and maintained their view that Dr Wee's conclusion as to the cause of the deceased's death was correct. Their responses to the specific points raised by Dr Adelstein at the CI are set out in detail below.

***Weight of the deceased's lungs***

147 Firstly, according to Dr Fowler and Dr Rao, the weight of a deceased person's lungs is inconclusive as to how rapidly he had died. The lungs of an individual who has died by asphyxia due to hanging are sometimes found to

be heavy because when there is a lack of blood to the brain, the adrenal glands would secrete adrenaline to force the blood from the periphery of the body into the central organs in a bid to preserve life, thereby causing a certain degree of pulmonary oedema. However, there is too much individual variability to say that the weight of a deceased person's lungs is a good indicator of how rapidly he had died. According to Dr Fowler, he does not know a single pathologist who would use lung weights as an indicator of the quickness of death. In both experts' view, there is simply too much individual variability in lung weights to say with a reasonable degree of medical certainty that lung weights have a correlation with the time taken for an individual to die.

#### *Absence of petechiae*

148 Next, Dr Fowler and Dr Rao disagreed with Dr Adelstein's assertion that the absence of petechiae indicated that the deceased had died rapidly from some other cause other than hanging. Dr Fowler explained that petechiae are usually caused by capillaries bursting when the blood pressure exceeds the ability of capillaries to transmit blood from the arteries to the veins. When the suspension point of a ligature is at the back of the neck (as it was in the deceased's case), the ligature rides evenly around both sides of the neck. Pressure is therefore applied equally to both sets of blood vessels, jugulars and arteries in the neck, which, in turn, causes blood to be unable to flow to the area above the ligature. Since the supply of blood to the area above the ligature, including the face, was cut off, it was consistent to find no petechiae around the deceased's eyes and face. Regardless of how much longer the deceased's heart continued to beat after he lost consciousness, the deceased's heart would not have been able to generate enough blood pressure to force the

blood to the area above the ligature since the deceased's body weight ensured that the pressure exerted on his neck was maintained.

149 In particular, Dr Rao had co-written an article with Charles V Wetli entitled "The Forensic Significance of Conjunctival Petechiae" (1988) *Am J Forensic Med Pathol* Vol 9 No 1. The aim of this article was to assess the significance of conjunctival petechiae as there was a dearth of medical literature on this topic back in 1988. Dr Rao and her co-author reviewed 5,000 autopsies and noted as follows (at pp 33 to 34):

Conjunctival petechiae were mentioned in 227 of the 5,000 autopsies reviewed for an overall incidence of 4.5%. They were most frequently associated with deaths resulting from natural causes (39.2%), followed by accidents (23.9%), homicides (21.2%) and suicides (15.8%).

...

The relatively low incidence of conjunctival petechiae among hanging victims may indicate the rapidity with which death occurs, with the ligature obstructing the airway, the venous return from the head, and the arterial supply to the head in rapid sequence. Conversely, the presence of conjunctival petechiae in hanging victims may indicate a relatively slow death.

Dr Rao's article was subsequently one of the articles reviewed in Ely SF, Hirsch CS, "Asphyxial Deaths and Petechiae: A Review" *J Forensic Sci* 2000; 45(6). In this review article, the authors concluded (at p1276) that having reviewed all the literature, "it is [their] contention that no relationship exists between the development of petechiae and the presence or absence of asphyxia". Dr Rao agreed with the authors' conclusion and confirmed that by logical extension, the fact that no petechiae were found on the deceased would not in itself exclude hanging.

150 In short, both Dr Rao and Dr Fowler took the position that the absence of petechiae in the deceased's eyes and face was consistent with asphyxia due to hanging.

*Alleged bruises*

151 As for the allegedly suspicious marks/discolouration on the deceased's hands, neck, forehead and ear, Dr Fowler and Dr Rao maintained that these were not evidence of injuries sustained in a struggle. These were simply signs of post mortem lividity. If the deceased had been bruised in those areas, the bruises would have showed up within a few minutes or hours, and definitely by the time that the autopsy was conducted. This was a point that even Dr Adelstein agreed with. I will set out Dr Fowler and Dr Rao's evidence specifically in relation to each feature in the paragraphs that follow.

*The deceased's hands*

152 Dr Fowler and Dr Rao maintained that there were no bruises on both the top side and the palms of the deceased's hands.

153 Turning first to the top of the deceased's hands, darker areas were observed between the deceased's knuckles and not on the point of the deceased's knuckles. These darker areas could not be evidence of bruising as one would not normally sustain injury to the grooves of one's knuckles in the course of striking something. The deceased's knuckles were pale in the autopsy photographs not because someone had tried to cover up the alleged bruises with make-up, but because the deceased's hands were curled up, tightening the skin over the knuckles and therefore preventing the blood from flowing into those areas as easily as the rest of the hands where the skin is looser. The manner in which the deceased's hands were supported to take the

photographs of the top of the deceased's hands was part of standard procedure and not indicative of an attempted cover-up since the deceased's hands would have gone into rigor and some support would have been required to push the deceased's fingers out to display them.

154 The palms of the deceased's hands, while dark purplish-red in colour, were not bruises. The discolouration was uniform throughout the palms except for the skin creases which were still clearly visible. If the deceased had sustained bruises, the discolouration would have been more discrete and the skin creases would not have been spared the discolouration. The palms of the deceased's hands were darker than the top of his hands because the hands would have been placed flat on the autopsy table thus causing the blood to settle more at the palms of the deceased's hands.

155 In short, the evidence of both Dr Fowler and Dr Rao was that the condition of both the top and palms of the deceased's hands was entirely consistent with post-mortem lividity, and inconsistent with bruising.

#### The deceased's neck

156 Next, Dr Fowler and Dr Rao both disagreed with Dr Adelstein's assertion that there were injuries to the deceased's neck as evidenced in some of the 4 July 2012 Photographs. If the deceased had tried to extricate himself from a carotid arm lock, he would have left *vertical* scratch marks and/or bruises in a bid to remove the attacker's arm. The marks seen in the relevant photographs only showed some discolouration running *horizontally* across the deceased's neck. Dr Fowler and Dr Rao explained that when the deceased was suspended from the ligature, his head was in a downward angle causing the skin around his neck to be bunched up into rolls. During the autopsy, the deceased's neck would have been extended backwards, and this, in turn,

would open up the rolls in the neck resulting in a set of parallel *horizontal* stripes.

#### The deceased's forehead

157 As for the slight discolouration on the deceased's forehead found in some of the 4 July 2012 Photographs, Dr Fowler and Dr Rao both disagreed with Dr Adelstein that this was evidence of a bruise. They explained that the slight discolouration was due to post-mortem changes caused by the fact that as part of the autopsy, the deceased's scalp had to be peeled back and his cranium removed to examine the brain, then put back. Dr Fowler and Dr Rao agreed with Dr Wee that if there was a bruise on the deceased's forehead, Dr Wee would have seen haemorrhage when he reflected the deceased's scalp and looked under the scalp. Dr Fowler further pointed out that Dr Wee had even gone into so much detail as to note one or two scattered pinpoint haemorrhages under the scalp. Dr Fowler said that if Dr Wee could see those pinpoint haemorrhages and yet missed a bruise, he (*ie*, Dr Fowler) would be stunned.

#### The deceased's ear

158 In relation to the slight discolouration on the deceased's right ear found in some of the 4 July 2012 Photographs, Dr Fowler and Dr Rao both disagreed with Dr Adelstein that this was evidence of a bruise. Dr Fowler was of the view that the discolouration was instead caused by the fact that the small white towel interposed between the ligature and the deceased's neck was bunched up around the area near the deceased's right ear as evidenced by the photographs of the scene. This bunching up had the effect of causing pressure at that area which resulted in those marks.



*The causes of death suggested by Dr Adelstein*

159 I turn now to set out Dr Fowler and Dr Rao's responses to the two causes of death suggested by Dr Adelstein, which were, to recapitulate: (a) death by taser; and (b) death by carotid arm lock.

160 Dr Fowler and Dr Rao pointed out that if the deceased was killed by a taser as suggested by Dr Adelstein, one would expect to find two pimple-like burn marks at the site of the electrical discharge. No such marks were noted in the autopsy report, nor was there anything in the autopsy report which could be construed to be as such. Dr Fowler and Dr Rao also gave evidence that the lethality of tasers is very unlikely in individuals who do not suffer from anything which would make them more vulnerable to an electric shock, such as a pre-existing heart disease or other debilitating conditions. In the deceased's case, nothing of such a nature was identified in the autopsy.

161 In response to Dr Adelstein's suggestion that the deceased had died in a carotid arm lock, Dr Fowler and Dr Rao pointed out that the absence of vertical scratch marks on the deceased's neck and the absence of injury to the deceased's fingernails were two important negative findings that effectively ruled out this possibility. One would expect to find at least one, if not both findings, because the natural reaction for someone placed in an arm lock would be to force one's fingers between the attacker's arm that is wrapped around the neck to try to pull it away. The marks around the deceased's neck were not bruises or injuries sustained in the process of extricating himself from an arm lock, but signs of post-mortem lividity (see [156] above).

162 Dr Fowler further pointed out that if the deceased was already dead before he was suspended on the ligature, he would have expected marks to be left on the deceased's upper arms, just beneath the armpit area, as a result of a

person or people picking up and moving the deceased's body around. In particular, the chances of such marks being left are high because it would take considerable effort to suspend the deceased (who was about 89 kg heavy) on the ligature. No such marks were observed in the autopsy report.

***This court's finding on the cause of death***

163 Having set out the evidence of the various pathologists, I will now set out my analysis and observations of the evidence presented.

164 I turn firstly to the substantive evidence of the various pathologists. It was first and foremost clear that the evidence of Dr Wee, Dr Rao and Dr Fowler stood up to scrutiny. It was evident from the details set out in the subsections above that the three of them were able to refute all of the points that Dr Adelstein had raised in a manner that was cogent, internally and externally consistent, and supported by the relevant pathological findings and medical literature.

165 In contrast, Dr Adelstein's evidence was unsupported, and in fact, at times *contradicted* by the relevant pathological findings and medical literature. In addition to the medical literature discussed in [149] above, it was also evident that *Spitz and Fisher* did not support Dr Adelstein's assertion that petechiae would be present in about 90% of cases of hanging. Dr Adelstein had grossly exaggerated this figure, as it is clear from the relevant portions of p 787 of *Spitz and Fisher* reproduced below that the figure stated by the authors was only 50%:

Petechial haemorrhages are typically found in the conjunctivae, the skin of the eyelids, the forehead and the upper cheeks ... Petechiae in the lining of the mouth and throat, and in the muscles of the temples are infrequent. petechiae in these locations are meaningful only in the

presence of petechiae in the face and eyes. *Over 50% of suicidal hangings show petechial haemorrhages.*

[emphasis added]

It was also significant that the learned authors of *Spitz and Fisher* had also specifically stated (at p 788) that “the presence of petechiae does not conclusively prove that asphyxia has occurred, only that there was mechanical interference with the blood flow”. This was an important point that Dr Adelstein either did not note (even though it was only one page away from p 787 of *Spitz and Fisher* which he (wrongly) relied on), or, he simply chose not to bring to the court’s attention.

166 I also observed that instead of focusing on the pathological and medical issues for which he was called as an expert, Dr Adelstein often gave evidence that went beyond this scope. One example was when he professed to give evidence from his point of view as a self-professed “amateur social worker”. Another example was when he gave his opinion that the PDF Note was written by the deceased’s “assailants” and not the deceased. When Dr Adelstein gave such evidence beyond the scope of a pathologist, he claimed to do so as a person with a “unique appreciation of death threats” and “a man that experienced all these issues in [his] life”, and these personal experiences included (as highlighted in [144] above) his alleged run-in with the Japanese yakuza and the alleged assassination of his son’s lawyer by the mafia in Manila which was ruled a suicide. I found such evidence which went beyond the scope of Dr Adelstein’s role as a pathologist nothing short of bizarre and extremely unhelpful in the way that it detracted from the critical pathological issues before the court.

167 Coming back to the issue of the cause of death, Dr Adelstein conceded that his original opinion of garrotting was founded on his “speculation” that

someone from “the two companies” (presumably the IME and Huawei) would benefit from the deceased’s death. He then changed his opinion during the CI and said that the cause of the deceased’s death was a taser, carotid arm lock or some other unknown cause of death. Dr Adelstein’s change in opinion was primarily due to the fact that there were no other injuries to the deceased’s neck other than the ligature mark. In my view, such a change in opinion was surprising and unsatisfactory because Dr Adelstein had professed to have had sight of the autopsy report when he prepared his report. The following portion of the autopsy report is significant and is reproduced in full:

**NECK:**

The neck was dissected in situ in a bloodless field.

The hyoid bone, thyroid cartilage and other laryngeal cartilages were intact with no fractures.

There was no haemorrhage in the muscle and soft tissue of the anterior neck. The common carotid arteries, internal jugular veins and vagus nerves were intact. The common carotid arteries showed mild atherosclerosis. The thyroid and submandibular glands were intact and unremarkable. Cut sections of the thyroid and submandibular glands showed no haemorrhage. The atlanto-occipital joint and cervical spine was intact with no fracture.

The responses of Dr Wee, Dr Rao and Dr Fowler which were forwarded to Dr Adelstein before the CI did not include any new facts. These three doctors only pointed out the substance of the contents of the autopsy report to highlight that there were no other injuries to the deceased’s neck so he could not have been killed by garroting. There are therefore two possible interpretations to Dr Adelstein’s change in view. Either Dr Adelstein could not tell or had not properly read from the autopsy report that there were no other injuries to the deceased’s neck, or, he had not considered this issue until after Dr Wee, Dr Rao and Dr Fowler pointed out to him that one would normally

expect injuries to the neck in a case of garroting. Both these possibilities present cause to view the credibility of Dr Adelstein's evidence with a great degree of circumspection. An expert witness is allowed to change his views, but when there is a material change in position that is not attributed to justifiable reasons (such as the provision of new facts or the publication of new studies which suggest that a different view ought to be taken), the court has no choice but to doubt the reliability of such an "expert's" view.

168 I was also inclined to place greater weight on the evidence of Dr Wee, Dr Rao and Dr Fowler, as the three of them had undergone formal training in forensic pathology to receive their certification in forensic pathology. In contrast, Dr Adelstein made it clear that he had not undergone any formal training in forensic pathology, nor is he certified in forensic pathology. This distinction is crucial as forensic pathology is a specialised field in relation to which the attendance of formal training and the obtainment of board certification would be significant, especially in cases that are not simple or straight-forward. The following extracts from the Preliminary Report on America's Medicolegal Offices prepared for the National Institute of Justice Forensic Summit in 2004 by The National Association of Medical Examiners at pp 5, 10 and 14 provide a brief explanation of the practice of forensic pathology in the US:

To be a board certified forensic pathologist, one must have graduated medical school; obtained a medical license; spent a minimum of three to four years training in general pathology ... and one year additional subspecialty training in forensic pathology. Following satisfactory performance in an accredited training program, one must then take and pass examinations in both general pathology and forensic pathology. Only then does a physician become a board-certified forensic pathologist.

...

Due to the scarcity of forensic pathologists, hospital pathologists practicing “anatomic” or “clinical” pathology are often consulted about forensic pathology issues. However, hospital autopsies and medicolegal autopsies differ from one another in many very important ways. No matter how competent these pathologists are in the practice of anatomic or clinical pathology, however, only licensed physicians with formal training and expertise in the theory and practice of forensic pathology should perform medicolegal autopsies.

...

Nationally, many pathologists without adequate forensic training elect and are permitted to perform medicolegal autopsies. This practice leads to errors in both the performance and interpretation of the results of forensic autopsies.

169 Next, even if one were to take Dr Adelstein’s case at its highest that he had carried out more than 100 cases of hanging, he still has considerably less experience than Dr Wee (who has done over 800 autopsies for hanging cases), Dr Fowler (who, at last count 10 to 12 years ago, had done about 120 autopsies for hanging cases) and Dr Rao (who has done hundreds of autopsies for hanging cases). I emphasise that this is not just a numerical comparison, but clearly, on *both* a quantitative *and qualitative* analysis, Dr Wee, Dr Fowler and Dr Rao have more experience, and more qualified one at that (see [168] above), than Dr Adelstein.

170 I also saw no reason to doubt the independence of Dr Fowler and Dr Rao. These two doctors were not, as Dr Adelstein initially suggested, “paid a lot of money” for their input. As noted at [143] above, Dr Rao did not charge anything for her services, and Dr Fowler only charged a consultation fee for the time he spent reviewing the autopsy report. In any event, I should add that a high remuneration (which I did not find) is not in itself sufficient or necessary to prove that an expert has not been independent in giving his views. A court would, naturally, scrutinise the evidence of an expert to see if his or

her opinion has been presented in a biased manner so as to favour the party remunerating them. There was absolutely no basis in this case to find that Dr Fowler and Dr Rao had not been independent in the giving of their evidence.

171 I also found no basis to doubt the professional competency of Dr Rao. In response to Dr Adelstein's allegation that she had made previously a mistake in her conclusion that a footballer had died of viral meningitis as opposed to heat stroke (see [143] above), Dr Rao explained that the brain of the footballer in that case was examined by a board-certified neuro-pathologist who concluded that the deceased's brain showed signs of viral meningitis. The footballer had also manifested symptoms which were neurological. Dr Rao had spent six months compiling all the data before certifying the cause of the footballer's death as viral meningitis. Other than Dr Adelstein's bare assertion, there was no basis to say that Dr Rao's conclusion in that case was wrong.

172 It was plain for all to see that Dr Adelstein was flippant in putting down other medical professionals. His remarks were baseless, entirely uncalled for, and absolutely unprofessional. In particular, Dr Adelstein's lingering grudge against Dr Rao (see [143] above) compelled me to gravely doubt his objectivity as an expert witness. The offhand remarks by Dr Adelstein were also consistent with the cavalier attitude which he had shown to the court in other aspects, such as his deceitful mischaracterisation of *Spitz and Fisher* (see [142] and [165] above) and his dismissal of the deceased's psychiatric condition on the (unsubstantiated) basis that psychiatry was "not a real science" (see [145] above). To put it bluntly, Dr Adelstein had, on his very own accord, showed himself to be an incredible and unreliable expert witness.

173 For all of the abovementioned reasons, I accepted the evidence of Dr Wee, Dr Fowler and Dr Rao, and rejected the evidence of Dr Adelstein. The weight of the deceased's lungs and the absence of petechiae were not inconsistent with asphyxia due to hanging, and none of the marks on the deceased's hands, neck, forehead and ear were bruises but were instead signs of post-mortem lividity. The evidence was inconsistent with death by a taser, carotid arm lock and the possibility of there having been another person or other people involved in the deceased's death. Instead, the evidence was incontrovertibly consistent with asphyxia due to hanging. I thus consequently found that the medical cause of the deceased's death was *asphyxia due to hanging*.

#### **FOUL PLAY OR SUICIDE?**

174 Having determined that the cause of the deceased's death was asphyxia due to hanging, I turn now to determine whether there had been some foul play (other than garroting, taser or carotid arm lock which have already been ruled out) involved in the deceased's death, or if the deceased had committed suicide by hanging himself. The possibility of foul play (other than garroting, taser or carotid arm lock) is relevant since Dr Wee's evidence was that death by asphyxia due to hanging can also occur if the deceased was first made unconscious and then suspended on the ligature. The following aspects of the evidence will be analysed herein:

- (a) The preliminary issue of the authenticity of the relevant evidence;
- (b) The NOK's allegation of foul play;
- (c) The deceased's mental state;



- (d) The scene found on 24 June 2012; and
- (e) Other circumstantial evidence.

### *Authenticity of the evidence*

175 Before delving into the substantive evidence, it is appropriate to firstly address the doubts raised by the NOK as to the authenticity of the following aspects of the evidence presented by the State, namely:

- (a) The deceased's HP Laptop;
- (b) The 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes;
- (c) The PDF Note;
- (d) The data on the deceased's HTC mobile phone; and
- (e) The photographs taken by the police.

### *The deceased's HP Laptop*

176 Firstly, the NOK raised the suggestion that the internet history, the PDF Note and some other documents were found in the deceased's HP Laptop only because some unknown source had planted them there, possibly by way of remote access, so as to mask some foul play afoot. There was also the suggestion that the integrity of the HP Laptop had been compromised because SSI Rayme had assessed the HP Laptop at the crime scene. In response to such suggestions, Assistant Superintendent of Police Soong Yen Peng ("ASP Soong") gave evidence confirming that the operating system of the deceased's HP Laptop was Windows 7 Home Premium and that the Registry Key 3 which was found to be "01 00 00 00" meant that remote access connection on the

deceased's HP Laptop was disabled. There was also no evidence of Telnet software, or any other software, which was installed on the deceased's HP Laptop to enable remote access connection. Furthermore, the deceased's HP Laptop had been password protected by him, so only a user with the correct password could have accessed it. As I will elaborate upon later in [254] and [277], the contemporaneousness of the deceased's activity on his HP Laptop, his text message exchanges with Shirley and his emails to others also showed that it was extremely unlikely that someone else other than the deceased had created and/or planted the internet history and documents found on the deceased's HP Laptop. All in all, I found that there was no reasonable basis to call into question the authenticity of the internet history and documents found on the deceased's HP Laptop.

*The 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes*

177 Next, the NOK also raised the possibility that the words on the 1<sup>st</sup> and 2<sup>nd</sup> Post-It notes were not written by the deceased but were instead forged and planted there by some unknown source, again to mask some foul play afoot. On this issue, the evidence of a handwriting expert, namely, Mr Yap Bei Sing ("Mr Yap"), a Consultant Forensic Scientist with the Forensic Chemistry and Physics Laboratory of the Forensic Science Division at the HSA, was that it was "probable" that the writer of the entries in the deceased's IME diary (*ie*, the deceased himself, as confirmed by Mary Todd in her conditioned statement) also wrote the 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes. According to the Explanatory Notes relied upon by Mr Yap, this finding of "probable" meant as follows:

There are similarities noted between the questioned and specimen handwriting. The evidence is insufficient to indicate a high probability but is [*sic*] still points towards common

authorship. It could be that the quantity of writing is small, or that there are few characteristic features.

178 Mr Yap presented in court the specific distinctive features in the handwriting found in the deceased's IME diary which matched the 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes. Having scrutinised his presentation, I agreed that the similarities in the handwriting found in all three documents certainly outweighed the differences. Mr Yap also explained that despite the many similarities, he was only able to conclude that it was "probable" (as opposed to "highly probable" or a conclusive finding) that the writer of all three documents were one and the same mainly because the quantity of writing found in the 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes were too small. I accepted Mr Yap's evidence and his conclusion as it was, in my assessment, cogent, well-reasoned and fair.

179 The NOK questioned whether the 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes could have been written by the deceased since he was known to have shaky hands, and the opinion of Mr Yap was that the 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes did not look like it was written by somebody with shaky hands. I did not think this point about the deceased's shaky hand was necessarily probative in the NOK's favour as it was clear from the evidence that the deceased did not have shaky hands all the time. It was also evident from the IME diary (which Mary Todd in her conditioned statement confirmed contained the deceased's handwriting) that the deceased's shaky hands did not affect his handwriting.

180 The fact that the 1<sup>st</sup> Post-It Note (which stated "Please do not enter. Please call the police") was left on the master bedroom television console instead of on the apartment's main door or even on the master bedroom door where the placement of such a warning would have been more useful, was also ultimately neither here nor there. When weighed against the backdrop of all the evidence, and in particular, the similarity of the handwriting found in both

the 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes and the deceased's IME diary, it was more likely than not that the deceased had simply forgotten to paste the 1<sup>st</sup> Post-It Note somewhere more obvious after writing it. Overall, I was satisfied that the 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes were indeed written by the deceased himself.

### *The PDF Note*

181 As alluded to earlier at [103], the NOK disputed that the PDF Note (reproduced at [90] above) was in fact written by the deceased. The full extent of their arguments is set out in the paragraphs below.

182 Specifically in relation to the note on the first page of the PDF Note addressed to "Everyone", the NOK, and more specifically Mary Todd, made specific comments in an email dated 19 May 2013 to an unknown person exhibited in her conditioned statement. I have reproduced in full her comments in a table format below:

S/n	Extract from the PDF Note	Mary Todd's comments
1	I just want to make it clear that I do not blame anyone for my condition except myself.	What condition? The only condition Shane ever mentioned to us was his high level of anxiety because of what the company was putting him through.
2	People at work have been patient and kind to me and have given me ample opportunity to succeed.	Shane never would have said this about IME. He hated the way IME was run and the way the top management treated people. Shane did succeed to the point he was awarded \$22,000 bonus for being the top employee.
3	My parents and family have given me more support than I could ask for.	The only support he asked for was to have his dad help him transfer his money out of Singapore. He told both of us that he was afraid for his life, which caused him to be very anxious. I helped talk him through his anxiety.

S/n	Extract from the PDF Note	Mary Todd's comments
4	My friends in Singapore have been very kind and understanding and have tried to help me through this.	We talked to several of Shane's closest friends and co-workers, not one of them said that they knew Shane was in trouble and needed help. They all stated how excited Shane was to go back to the US.
5	And my girlfriend Shirley has been always loving and supportive even when it was no fun to hang out with me.	Grammar
6	She has been the most constant source of support, love, and friendship to me in Singapore and without her I wouldn't have made it this long.	According to Shirley, Shane never once mentioned that he felt suicidal or that he needed her help. She did say that he was depressed about his job and seemed anxious, and that his hands were shaking more than normal.
7	I am so sorry it has come to this but I feel I am just a burden to those around me.	Shane has never said to us that he felt like a burden. Shane has been on his own since he started college at age 17. We never paid for his education, his prospective school always covered tuition and living. Shane has been one of our greatest delights. We have never considered him a burden. He has a large family who loves and adores him beyond life itself, as you will see when you see the video of Shane's funeral.
8	I have tried to get jobs in the U.S. but I know I am not capable of fulfilling the duties required of me.	Shane had a great job offer with a company in Virginia and was very excited about working for an American company. At his going away party right before he was murdered he was telling all his friends about it.
9	I hope that you can remember the good things about me, about how I was loving son, grandson, brother, nephew, cousin, friend, boyfriend, co-worker and teammate.	Note Asian grammar

S/n	Extract from the PDF Note	Mary Todd's comments
10	I had a few successes in life, so please try to remember my actions by those successes and not by the failure I have succumbed to.	This is ridiculous! We are a family who cares far more about who a man is, not what he has accomplished. Our son would never say this.
11	If you allow me to, I ask that my family decides what to do with any remaining money.	Again, note grammar, very Asian.
12	I suggest giving the money to charity.	Is this the voice of a man so desperate that he would take his own life, yet be this calculating?
13	Love to all, Shane Todd	I've never seen Shane end a letter this way.
14	Parents: Richard Todd and Mary Todd	What's all this about? How did Shane have the presence of mind to add this?

183 And after all these specific points, Mary Todd also had this to say:

This letter does not reflect one thing that I recognise in Shane's way of writing or way of relating. Shane was a much better writer than this, and a much deeper person. If Shane really wanted to kill himself he would have thought it through long and hard. He never would have done it this way or in Singapore. He had his airline ticket for July 1, 2012. It was obvious by the condition of his apartment that Shane was in the middle of packing and selling off his things. I do not believe for one minute that Shane took his own life, and neither does anyone who knows him.

184 Next, Mary Todd's comments in relation to the first note on the second page of the PDF Note addressed to "Mom and Dad" are set out in the table below:

S/n	Extract from the PDF Note	Mary Todd's comments
1	As you know I have been going through a difficult time and I am facing problems that I don't know how to solve.	To our knowledge, the only problem Shane was going through was anxiety due to stress at work and the things they were asking him to do. He had solved his

S/n	Extract from the PDF Note	Mary Todd's comments
		problem by quitting his job and getting a new one in the US.
2	You both have given me such good advice but I don't have the strength or ability to follow through.	Shane did take our advice. We told him he needed to get out of Singapore ASAP. He gave his 60 day resignation notice to IME. He was getting ready to come home when his life was taken from him.
3	I want to reiterate that none of this is your fault and despite the things I have said to you in the past, I am the only one to blame for my problems.	We have no idea what this means. Shane has never said or blamed us for anything in the past. The only thing he has said to us in the past is that moving to Singapore was the biggest mistake of his life ...
4	I am so proud of the things you have built and the lives you have touched through your church and ministry.	This does not make sense. The accomplishments that have always matter <i>[sic]</i> the most to us is the family we have built and the relationships we have maintained.
5	I hope that you understand that I am so sorry for the pain this causes. I just know how much of a burden I will be to you in the future so I feel it is better to do this now rather than wait until I have caused more damage.	Shane would never say this. My sons are my greatest gift, my highest desire, the thing I value most in life. I have raised them to know that they are the best gift God has ever given me. My son would know that this act of self destruction would kill me. There could be no more damage than this.
6	You gave me so many great memories in life, spending time on the lake in Montana, going to the beach to drink Shirley Temples, bean dip at happy hour, fishing and snorkeling in the Keys, going to my countless sporting events, barbeques and family functions in our house on the hill, and going to church on Sundays.	<p>Not one of these memories are significant, they are all periphery. Nothing said here touches my heart strings. Not to mention we never drank Shirley Temples on the beach.</p> <p>(Note: The NOK had also alleged during the CI before they withdrew that "Keyes" was spelt wrongly as "Keys", and this was something the deceased would not have done as he had grown up in the Keyes.)</p>

185 As for the second note on the second page of the PDF Note addressed to “John, Chet, and Dylan”, Mary Todd’s comments are as follows:

This is not the way Shane would say good-bye to his beloved brothers. Dylan was turning 21 on June 26. Shane couldn’t wait to celebrate with him. Shane was going to be an usher in his cousin Katie’s wedding on August, 4<sup>th</sup>, which he never mentioned in this letter. Truly, two meaningless sentences are an insult to the relationship Shane shared with his brothers and cousins. John and Dylan also met with the FBI in Singapore to outline why they were sure this letter was not written by Shane.

186 John Todd also stated in his conditioned statement that this note did not align with the deceased’s personality. The way that he and the deceased wrote to each other was very relevant and up-to-date. There was never any small talk or catching up, and their relationship was a very real and close one. An example of a correspondence between himself and the deceased would be as follows:

John Todd:

Shane, hope things are going well but don’t think this not playing fantasy bullshit is gonna happen next year.. Ur the Commish. I told Carter I refused to play if he took over the league, he was so pissed he couldn’t see straight. I went under an alias “Dennis Matesik” with a team name “jabber walking first base” a sales rep that works with Jace. This is gonna fire Carter and the boys up so bad they’re gonna shit their pants. Hope you like the idea. Love you.

Shane Todd:

Haha thanks for the vote of confidence but Carter should do a satisfactory job as interim Commish ... as long as your cool with the occasional unannounced rule change and the fact that you probably won’t see your money at seasons end if you make the playoffs. The Dennis Matesik thing is hilarious, any other good names this season? How many times has Sam said Sheesh!!!! So far this season?



187 Turning now to the third note on the second page of the PDF Note addressed to “Shirley”, Mary Todd’s comments are as follows:

S/n	Extract from the PDF Note	Mary Todd’s comments
1	You have been an angel to me.	This is the only thing that is remotely familiar, Shane did call Shirley his angel.
2	I know this will cause you great hurt but I know that you will be able to stay strong and rely on God to help you heal from this.	Shane loved Shirley, he never would have left his body for her to discover and in turn traumatize her life forever.
3	I love you.	If Shane loved Shirley, but was so desperate to kill himself, he would have done it in a way that would not include her.

188 Lastly, Mary Todd wrote as follows at the end of her comments:

There is so much to say, I don’t know where to begin. All I can say is that when I read this letter it did not evoke one ounce of emotion in me. I felt relief, because I knew my son did not write this letter. It is not his style of writing. He is much smarter than this, much more feeling and a far better writer. It is way too cold and calculating, covering every important point. The memories were not our memories.

189 Mary Todd had also written in her conditioned statement that the deceased did not have the writing style on the PDF Note, which seemed very formal and cold and had words and phrases that she had never heard the deceased use before. It was her belief that if the deceased had written it, it was under duress or under the influence of somebody. According to Mary Todd, the deceased would have been broken-hearted and he would have expressed himself more eloquently.

190 For completeness, I should also mention that Richard, John, Charles and Dylan Todd all echoed sentiments similar to their mother in relation to the PDF Note. In addition, Richard Todd also raised the point that he was

surprised that there was no mention of Chinese technology transfer in the PDF Note considering that the deceased was a man of honour. Richard Todd also commented that the PDF Note was “not detailed according to [the deceased’s] standards”, and that he would have expected the deceased to have done a few drafts of the suicide note.

191 Having considered all these arguments and also taking into account not just the PDF Note but all other evidence in the round, I was satisfied that the PDF Note was in fact written by the deceased. I will elaborate more in the paragraphs that follow.

192 Turning first to the issues with the substantive factual contents of the PDF Note, I was firstly of the view that it was not uncharacteristic or necessarily inconsistent of the deceased to have written kind words about the people at the IME (see item 2 in the table set out at [182] above). Sometime after the deceased got his appraisal, he told Jeffrey that Dr Lo was a good boss despite giving him a lot of work. This must have been a genuine compliment given that it was a private conversation between the two and there was no reason for the deceased not to have meant what he said. Even in his exit interview and in the Exit Interview Form, the deceased (who, it bears highlighting, had absolutely nothing to lose at that time if he had reported negative things), had said positive things about his colleagues and Dr Lo (see [68] above). Furthermore, although the deceased had listed the following “cons” of working at the IME in a document found in his HP Laptop which was last opened and edited on 26 February 2012 titled “Pros Cons” (“the Pros and Cons List”):

- Poor management decisions
- Tracking by project office makes progress difficult

- Mountains of paperwork to get anything done
- Weak project leader
- No opportunities to network through conferences
- Overload of work, management doesn't understand how to properly distribute work
- Management decides to give projects to people with no experience or knowledge in that area
- Uncertainty of the ability to house equipment for project
- Possibility of violating US export control laws in project

he had also specifically listed several “pros”, namely “good opportunity to learn new technology”, “good opportunity to learn management skills” and “state of the art equipment”. Overall, it was clear from the evidence that although the deceased disliked *several* aspects of his job, he did not hate *all* aspects of his job at the IME *all* of the time. The evidence was also consistent with the deceased's statement in the PDF Note that “people at work have been patient and kind to [him] and have given [him] ample opportunity to succeed”.

193 As for the memory about drinking Shirley Temples on the beach that the NOK claimed never happened, I had to weigh that one alleged error against all the other memories that the deceased's family confirmed did happen. Taking the NOK's case at its highest (*ie*, that this memory did not in fact happen), I found that it was more likely that the deceased had remembered wrongly or expressed himself wrongly, than it was for the PDF Note to have been written by somebody else other than the deceased. If it had been written by someone else, that person would have carefully verified every single personal detail to get it right or not have included any personal details at all. He would not have written something that was not verified to be true and risk

the exposure of the falsity of the letter. On the other hand, if the deceased was truly under some form of duress to write the PDF Note as suggested by Mary Todd, he would have conjured up wholly and clearly non-existent memories to alert the reader; it would simply not have made sense for him to state at least six different true memories (*ie*, spending time on the lake in Montana, bean dip at happy hour, fishing and snorkelling in the Keyes, going to the deceased's countless sporting events, barbeques and family functions in their house on the hill, and going to church on Sundays) and include only one (allegedly) false memory.

194 As for the grammatical and spelling mistakes pointed out by Mary Todd, it was evident for all to see that these were very minor errors. The *overall* tone of the PDF Note was clearly consistent with somebody who had a good command of the English language. Even though the evidence showed that the deceased had prepared the notes sometime before his death (see [253] below), it was not inconsistent for the suicide notes to not be absolutely perfect in terms of grammar and spelling. After all, a suicide note is not a dissertation to be submitted or a paper to be published. It was also worth noting that the deceased did not have proper grammar and spelling in the sample correspondence exchanged between the deceased and John Todd either (see [186] above). As for Mary Todd's allegations of "Asian grammar" (see items 9 and 11 in the table set out at [182] above), it was a quantum leap of logic to say that these grammatical mistakes necessarily had to be "Asian" and therefore linked to the IME and/or Huawei. With respect, Mary Todd herself had also made grammatical errors in her email setting out her comments on the PDF Note (see item 4 of the table set out in [184] above).

195 Next, Richard Todd also mentioned that he would have expected the deceased to have done a few drafts of a suicide note (see [190] above). I

should point out at this juncture that this was indeed confirmed to be so, at least insofar as the note to Shirley was concerned, based on the results of the forensic examination conducted on the deceased's HP Laptop (see [252] below).

196 As for the stylistic issues with the PDF Note, there was some inconsistency as to the level of detail the deceased would be expected to display. On one hand, Mary Todd said that the deceased had "[covered] every important point" (see [188] above), yet on the other hand, Richard Todd said that the PDF Note was "not detailed" (see [190] above). In my view, it was overall consistent with the deceased's close relationship with his family that he wrote separate notes to his parents and his brothers. And as for the NOK's assertion that the PDF Note could not have been written by the deceased as it was too "cold" (see [188] above), it seems to me that it was not inconsistent for a person who was contemplating suicide to not be his usual effusive and warm self.

197 All these points lead me to my final one on this issue, which is that suicide notes cannot be broken down and analysed like a mathematical formula. There is simply too much subjectivity involved in the interpretation. What does not make sense to the deceased's family might nevertheless have made sense to the deceased. The memories that might not mean anything to the deceased's family might nevertheless have meant a great deal to the deceased. Ultimately, one may never be able to fully and squarely rationalise the thoughts and reasons of a loved one who committed suicide, or to understand the chosen method of suicide. Having regard to the PDF Note *in its totality* as well as all the other evidence considered, I was satisfied that the PDF Note was consistent with it having been written by the deceased.

*The data on the deceased's HTC mobile phone*

198 Next, there were some suggestions that the data on the deceased's HTC mobile phone had been compromised because IO Khaldun had checked through the mobile phone and did not switch it off. IO Khaldun gave evidence that he did not insert, delete, or amend any document or application on the HTC mobile phone when he checked through it on 24 June 2012 at the scene. Also, nobody else had access to the HTC mobile phone from the time that it was seized until the time that it was sent to the TCFB for forensic examination. IO Khaldun said that he did not switch the HTC mobile phone off but its battery went flat on its own after a few days. Mr Satish Kalkunte Sundara Raja ("Satish"), a Senior Manager with the Network Converged Operations Department of Starhub Ltd, gave evidence that the GPRS transactions on the deceased's mobile phone that took place between 12.46 am on 25 June 2012 to 5.03 am on 29 June 2012 as evidenced in the deceased's phone toll records, could be explained by background applications running automatically without human intervention. However, Satish also said that he could not conclusively tell if this was indeed the case because the detailed logs of the URLs or applications accessed by a subscriber are only kept by the service provider for three months.

199 Having regard to the abovementioned, there was, in my view, no reasonable basis to say that IO Khaldun had compromised the data on the deceased's HTC mobile phone.

*Photographs taken by the police*

200 Lastly, there were some suggestions that the police photographs of the crime scene had been doctored. According to the NOK, there were two moles found on the back and to the right side of the deceased's neck when his body

was prepared for burial as evidenced in one of the 4 July 2012 Photographs, yet, those two moles were not present in the photographs taken of the deceased's body when it was discovered on 24 June 2012. Dr Wee explained that the two moles identified by the NOK were actually not moles, but post-mortem blebs caused by fluid build-up within the skin after death as a result of bacteria. Dr Fowler and Dr Rao both agreed with Dr Wee's view. I also noted that State Counsel had stated in open court that the State was willing to extend to the NOK the master DVD to which the photographs in the Secure Digital card that was used was burned into. The NOK did not indicate whether it would take up this offer when it was presented to them, and they eventually withdrew from the proceedings midway. I further noted that the NOK did not make similar suggestions in respect of the photographs taken at the mortuary on 25 June 2012 which also did not show the "moles". The NOK did not appear to be entirely consistent in their allegations. For all these reasons, I was fully satisfied that there had been no doctoring of any photographs by the police or anyone, for that matter.

*This court's finding on the authenticity of the evidence*

201 For the above mentioned reasons, I found that there was no reasonable basis at all to doubt the authenticity of the evidence presented by the State. Having addressed this preliminary issue, I now turn to consider the NOK's claim that there was foul play involved in the deceased's death.

*The NOK's allegation of foul play*

202 The NOK believed that there was foul play involved in the deceased's death arising from his involvement with the Veeco Training and/or Huawei. I shall *in seriatim* set out and address the NOK's assertions in relation to three key issues, namely: (a) the possibility that the deceased was in possession of

confidential and valuable classified information; (b) the deceased's involvement with the Potential GaN Power Amplifier Project; and (c) the access of the deceased's HDD on 23 and 27 July 2012.

*Possession of confidential and valuable classified information*

203 One of the key pieces of evidence that the NOK relied on in their case that the deceased was murdered was a piece of paper with the deceased's handwriting that they found in an arch file in the deceased's apartment. The NOK claimed this was the deceased's handwritten copy of a recipe which he managed to copy during the Veeco Training ("the Alleged Handwritten Recipe"), and that this, in turn, was confidential and valuable classified information which the deceased was in possession of. The Alleged Handwritten Recipe is reproduced in full below:

$$W = 471 \text{ GHz}$$

$$\bar{\alpha} = \alpha \cdot \frac{W\eta_0}{R_s \cdot \sqrt{\epsilon_{eff}}}$$

$$\alpha \alpha \frac{R_s \sqrt{\epsilon_{eff}}}{\eta_0 W}$$

$$R_s = \sqrt{\frac{W\mu}{2\sigma}} = \frac{1}{\sigma\delta}$$

$$R_s(C_u @ 70GHz) = \sqrt{\frac{471 \times 10^9 \cdot 1.2566 \times 10^{-6}}{2 \cdot 5.96 \times 10^7}} = 0.0705\Omega$$

$$\bar{\alpha} = 0.1 \frac{dB}{cm} \cdot 8.686dB \cdot \frac{100cm}{m}$$



According to Dylan Todd, the deceased had also once told him that Veeco was not allowed to give recipes directly, but he could look at them on his own and write down anything he wanted. Dylan Todd responded that this sounded “kind of shady”, and the deceased agreed, but added “I guess that is how they do it”.

204 Surani, the representative from the IMRE who attended the Veeco Training with the deceased, gave evidence that the Alleged Handwritten Recipe was not a recipe or even part of a recipe. Surani explained that they were not given any real recipes for GaN on Silicon production during the Veeco Training, only dummy recipes. Surani’s evidence on this point was corroborated by Mr Wee Yong Seng (“Mr Wee”), a Veeco sales manager, who explained that the recipes used for training demonstration purposes were only in relation to some layers as Veeco does not have recipes which have been proven to be able to produce a device. Surani also explained that the only proven recipe that Veeco subsequently sent to the deceased and himself was a 2-inch GaN-on-Sapphire growth recipe (for Light Emitting Diode (“LED”) applications) (“the GaN-on-Sapphire Recipe”). The GaN-on-Sapphire Recipe was a standard recipe given to all the purchasers of Veeco’s MOCVD System from all over the world (including China, where Huawei is based), to test and confirm that the MOCVD System works. Further, according to Surani, who was with the deceased most of the time during the Veeco Training, the deceased did not have, nor could he have had, access to any other recipes. This is because nobody was allowed to access the MOCVD System at the training premises unless Veeco’s employees were present. The deceased would have had the opportunity to take down some handwritten notes, but this would have probably been in relation to understanding how the MOCVD System works, rather than a recipe.

205 In a similar vein, Dr Lo agreed that the Alleged Handwritten Recipe was not a recipe as a recipe was lengthy and complex and would typically consist of over 6000 parameter entries. Having looked at the GaN-on-Sapphire Recipe, I agreed. Jeffrey was able to identify the contents of the Alleged Handwritten Recipe as an equation which was probably used to calculate how much resistance a thin film deposited. In addition, Professor Kwong agreed with the IME's counsel that the second line in the Alleged Handwritten Recipe, namely " $\bar{\alpha} = \alpha \cdot \frac{W\eta_0}{R_s \cdot \sqrt{\epsilon_{eff}}}$ ", was actually identical to the formula found at pp 24 and 75 of the deceased's PhD Dissertation on "High Aspect Ratio Transmission Line Circuits Micromachined in Silicon":

#### **1.4.2.1 Low-loss over wide impedance range**

... The normalized conductor loss is taken as  $\alpha_c \cdot \eta_0 W / \sqrt{\epsilon_{eff}} R_s$ , where  $\eta_0$  is the intrinsic impedance of free space,  $W$  is the width of the transmission line,  $\epsilon_{eff}$  is the effective dielectric constant of the transmission line, and  $R_s$  is the surface resistance of the conductor.

...

#### **2.3.1.3 Comparison of model to finite element method simulations**

...

However, the conductor loss can be normalized to be mostly scalable by taking  $\alpha_c \cdot (\eta_0 W / \sqrt{\epsilon_{eff}} R_s)$  as was described in Section 1.4.2.1.

206 In addition to this similarity raised by the IME's counsel, I also noticed that the fourth line of the Alleged Handwritten Recipe, namely

“ $R_s = \sqrt{\frac{W\mu}{2\sigma}} = \frac{1}{\sigma\delta}$ ”, was also similar to the formulas stated at pp 55 and 63 of

the deceased’s PhD Dissertation. The relevant portions are reproduced below:

#### **2.2.4.1 Wheeler’s incremental inductance rule**

...

Wheeler used the argument that the internal reactance of the conductor will be equal to the resistance. Thus the resistance can be calculated from the internal reactance which is the product of the angular frequency and incremental inductance

$$R_w = \omega\Delta L = R_s \frac{\Delta L}{\mu} \quad (2.45)$$

where  $R_s$  is the surface resistivity of the conductor given by

$$R_s = \sqrt{\frac{\omega\mu}{2\sigma}} \quad (2.46)$$

...

#### **2.3.1.1.1 Parallel plate element parameters**

...

... where  $\mu_0$  is the free space permeability,  $\varepsilon_0$  is the free space permittivity,  $\varepsilon_r$  is the relative dielectric constant,  $\tan\delta_r$  is the dielectric loss tangent,  $\omega$  is the angular frequency,  $h$  is the conductor height,  $d$  is the dielectric gap width,  $\delta = \sqrt{2/\omega\mu_0\sigma}$  is the skin depth of the conductor, and  $R_s = \sqrt{\omega\mu_0/2\sigma}$  is the conductor surface resistivity...

207 Having considered all the evidence, I was certain that the Alleged Handwritten Recipe was not a recipe. It seemed to me that the Alleged Handwritten Recipe merely contained calculations in relation to the deceased’s PhD Dissertation which was not related to GaN or classified research at all. Other than the Alleged Handwritten Recipe, the NOK did not provide any other evidence to prove that the deceased had obtained

confidential and valuable classified information. I was also satisfied, for the reasons provided by Surani and Mr Wee (see [204] above), that apart from the Alleged Handwritten Recipe, there would not have been any opportunity for the deceased to come into possession of such information in the course of the Veeco Training.

*The Potential GaN Power Amplifier Project*

208 I now turn to the second key issue, which is the deceased's involvement with the Potential GaN Power Amplifier Project between the IME and Huawei. The three relevant sub-issues can be characterised as follows:

- (a) Did the Potential GaN Power Amplifier Project ever materialise, officially or otherwise?
- (b) If the Potential GaN Power Amplifier Project had materialised, could it and would it have violated export control laws and/or been used for military applications?
- (c) Was there some conflict arising from using the MOCVD System supplied by Veeco for a device to be researched in collaboration with Huawei?

*The non-materialisation of the Potential GaN Amplifier Project*

209 As set out earlier at [42] to [46], the IME's position is that the Potential GaN Amplifier Project did not actually materialise, officially or otherwise. According to the IME employees, this was because the IME and Huawei were at cross-purposes. Huawei wanted the more mature and reliable technology of GaN on Silicon Carbide on a 6-inch substrate. In contrast, the IME was more interested in the cheaper but less mature technology of GaN on Silicon on an

8-inch substrate, which would enable the IME to take commercial advantage of the existing Silicon infrastructure such as 8-inch Silicon foundries and fabrication plants in Singapore.

210 I accepted the evidence given by the IME employees as their evidence was cogent, internally and externally consistent, and credible. The tussle between the choice of GaN on Silicon Carbide or GaN on Silicon technology was also objectively corroborated by two emails sent by a representative of Huawei to various officers of the IME (excluding the deceased) dated 30 July 2011 and 4 August 2011. The relevant portions of the email dated 30 July 2011 are reproduced below:

Here are the action items to follow:

...

1. IME will provide the GaN-on-Si technology feasibility, performance target and technology development roadmap accordingly.

2. IME shall provide the competitive analysis of existing technology such as GaN on SiC and Nitronix etc

...

The relevant portions of the email dated 4 August 2011 are reproduced below as well:

Million units for PA basestation app and no other interest right now. Si Dan from BD may give you more info. But that should NOT be the point of concern for you.

I think you should be more concerned about your solution's technical merits than the commercial justification. From the slides we received so far, the substance is rather thin. Believe or not we are already in discussion with other collaborators and the window is closing rather quickly.

211 I should also mention for completeness that I did not accept Richard Todd's assertion in his conditioned statement that the deceased "was offered \$20,000 to stay in the IME for another 30 days to finish up a project he was working on" (presumably, the Potential GaN Power Amplifier Project). The \$22,568 that the deceased received in April 2012 was his performance bonus which was due to him then as a matter of course pursuant to the IME's standard human resource policies. Everyone else in the IME had also received their performance bonus during the same period. I accepted Dr Lo's evidence that he had only informed the deceased that he would lose his performance bonus if he tendered his resignation before May 2012. There was no evidence before me that Dr Lo had used the deceased's performance bonus as a carrot or a stick to induce the deceased to stay on at the IME. The deceased also clearly did not "finish up" the Potential GaN Power Amplifier Project as it had not even materialised.

212 Having carefully considered the evidence, I was satisfied that Huawei's decision not to proceed with the Potential GaN Power Amplifier Project as announced in their email to the IME dated 11 July 2012 (reproduced at [46] above) was credible and genuine. I also found that the Potential GaN Power Amplifier Project did not materialise because of the parties' different preferences for the choice of technology, and not because of any suspicious or classified reasons. Nevertheless, for completeness, I will go on to consider whether the Potential GaN Power Amplifier Project could and would have

violated export control laws and/or been used for military applications *if* it had materialised (which I did not find).

#### Violation of export control laws / use for military applications

213 There are two aspects of export control laws that are relevant in this CI. The first is generally in relation to export laws that restrict the power output level of devices to fixed levels across different frequency ranges. The second is in relation to the prohibition of using the MOCVD System for purposes other than commercial applications such as military applications pursuant to the terms of the export license. A breach of the MOCVD System export license would naturally also be a breach of general export control laws.

214 The idea that the Potential GaN Power Amplifier Project could have violated export control laws and/or been used for military applications in breach of the MOCVD System export license arose out of the deceased's complaints to his family that he felt like he had been made to compromise US security, as well as one of the cons listed in the Pros and Cons List, namely the "possibility of violating US export control laws in project" (see [192] above).

215 I will turn firstly to set out the evidence in relation to the issue of whether the specifications listed in the proposal for the Potential GaN Power Amplifier Project reproduced at [44] above (in particular, the 150 W and 0.5 to 3.0 GHz) could and would have violated export control laws generally. On this issue, Richard Todd had attached an opinion from one Mr Steve Huettnner ("Mr Huettnner") dated 18 May 2013 in his conditioned statement. As I had explained earlier at [13], I was not minded to admit hearsay evidence such as the opinion of Mr Huettnner since the State and the IME were not afforded the opportunity to test such assertions in court, given that the NOK did not call Mr Huettnner to testify in the proceedings and instead chose to withdraw from the

CI midway. Nevertheless, since the CI is an inquisitorial process where the formal rules of evidence do not apply, and since the State and the IME have had the opportunity to adduce their evidence on this point, I shall proceed to consider this issue. According to Mr Huettner, export control laws would be triggered to restrict power levels to 60 W when the frequency is between 3.2 to 6.8 GHz, and to 20 W when the frequency is between 6.8 to 31.8 GHz. It was evident from Mr Huettner's opinion that the trigger for general export control laws was a frequency of 3.2 GHz, so the specifications listed in the proposal for the Potential GaN Power Amplifier Project could and would *not* have violated export control laws.

216 Next, I turn now to consider whether the specifications listed in the proposal for the Potential GaN Power Amplifier Project reproduced at [44] above (in particular, the 150 W and 0.5 to 3.0 GHz) could and would have been used for military applications in breach of the MOCVD System export license. According to Dr Lo and Professor Kwong, the specifications are such that if the Potential GaN Power Amplifier Project had materialised (which it did not), it could only be used in commercial applications, and not in military applications. Dr Lo also gave evidence that the 150 W would have been too low for military applications, as for example, the power output and frequency for a base station for ship radar would usually have to be in the kilowatt range and about 224 GHz respectively. On this issue, Professor Kwong gave evidence that GaN-on-Silicon Carbide devices which have equal or even higher specifications than those listed in the proposal for the Potential GaN Power Amplifier Project, such as:

- (a) Freescale Semiconductor Inc's First GaN RF Product for Cellular Infrastructure Applications (350 W and 2.3 to 2.7 GHz);



- (b) Sumitomo Electric Device Innovations Inc's base station design for 3G/LTE/WiMAX Base Station (210 W and 2.6 GHz); and
- (c) RF Micro Devices Inc's tier-1 wireless base-station maker (up to 30 to 360 W, 0.7 to 3.8 GHz);

are used in commercial and not military related applications.

217 Having considered the evidence before me, I was satisfied that the specifications listed in the proposal for the Potential GaN Power Amplifier Project could and would *not* have been used for military applications in breach of the MOCVD System export license. On this point, I noted that while Mr Huettner had suggested that the specifications violated general export control laws, he did not go so far as to suggest that the specifications meant that the Potential GaN Power Amplifier could and would be capable of military applications.

218 I turn now to the third issue, which is whether the IME would have surreptitiously researched beyond the listed specifications, and in so doing, violated export control laws and/or encroached into the field of military applications. Mr Huettner had stated in his opinion that the specifications listed in the proposal for the Potential GaN Power Amplifier Project as reproduced at [44] above (in particular, the 150 W and 0.5 to 3.0 GHz) "seems like it was deliberately trying to skirt the export law". According to Mr Huettner, export control laws would be triggered to restrict power levels to 60 W when the frequency is between 3.2 to 6.8 GHz, and to 20 W when the frequency is between 6.8 to 31.8 GHz. His conclusion was that the 150 W and 0.5 to 3.0 GHz specifications for the Potential GaN Power Amplifier Project

“naturally would also be capable of close to 150 W at 3.2 GHz and therefore an export violation”.

219 Professor Kwong explained to the effect that the IME would not have breached export control laws and/or engaged in research into classified military applications. The IME does undertake *non*-classified research work with military or defence agencies, but these are conducted openly with no restrictions on the publication of research findings. If the IME had breached export control laws and/or engaged in research into classified military applications, its ability to achieve its economic mission of developing research and development capabilities that can advance innovation and sharpen the competitiveness of Singapore’s industry sectors, would be impeded. Professor Kwong further pointed out that the approximately 140 research personnel at the IME: (a) come from over 22 different countries; (b) are not required to obtain security clearance from the Singapore government or any other government; and (c) are not required to undergo some form of psychological screening. These factors make classified research at the IME impossible.

220 Dr Lo also pointed out that in the email sent by Huawei dated 4 August 2011 (reproduced at [210] above), Huawei had indicated that the Potential GaN Power Amplifier Project was for “million units for PA basestation app and no other interest right now”, and this in turn confirmed that Huawei was only interested in commercial applications.

221 Professor Kwong also gave evidence that it was general practice in the research industry to research a little beyond the specifications of the required device because of the possibility that something in the actual execution of the project might degrade the performance of the device. As such, the frequency

and power output of the actual device might be lower than that researched into for the model.

222 After weighing all the evidence, I was convinced that the IME would have had absolutely no incentive, and every disincentive, to violate export control laws and/or engage in classified research, if the Potential GaN Power Amplifier Project had materialised (which I did not find). Other than Steve Huettnner's implied assertion that the IME could in fact have researched at 3.2 GHz (instead of a maximum of 3.0 GHz as listed in the proposal), there was no evidence to support the NOK's case that the deceased was *in fact* made to violate export control laws and/or to be involved in classified research which would threaten US security (or the security of any other nation). It was also significant that in the Pros and Cons list drawn up by the deceased, he had only written of the "possibility" of violating US export control laws. While it was theoretically possible that the IME could have surreptitiously departed from its listed specifications had the Potential GaN Power Amplifier Project materialised (which I did not find), there was compelling evidence that the IME *would not* have done so.

223 The evidence showed that the deceased was alive to and was worried about the possibility of violating export control laws and compromising US security, although on an objective assessment there was no basis to have such worries that the IME would have actually proceeded to do so. In my view, this incongruence between the objective state of affairs and the deceased's perception of affairs in the months before he died could be satisfactorily explained by his psychiatric condition, in particular, the significant component of anxiety that he suffered from (see [57] to [60] above). On this point, Dr Lee had given evidence that one of the manifestations of the deceased's significant component of anxiety would be a tendency for him to "catastrophise", a

phenomenon similar to “over-magnifying”, “over-thinking” and “over-analysing” things. It was also significant that the deceased did not know that the Potential GaN Power Amplifier Project did not eventually materialise as the final decision by Huawei not to proceed any further on the Potential GaN Power Amplifier Project was communicated to the IME only on 11 July 2012, after the deceased had died.

The deceased’s involvement with both Veeco and Huawei

224 I turn now to consider the NOK’s claim that the deceased had been placed in a position of conflict as a result of him using the MOCVD System supplied by Veeco for a device to be researched in collaboration with Huawei.

225 Professor Kwong, Dr Lo, and Romen all gave evidence that Huawei was not a competitor of Veeco. Veeco supplies tools, including MOCVD Systems, to countries around the world (including China, where Huawei is based), for research purposes. It is not the only supplier of MOCVD Systems in the world as other companies, such as Aixtron SE from Germany, also supply such tools. Huawei, on the other hand, is involved in the business of providing solutions and selling devices in the telecommunications industry; it is a systems integrator that purchases commercial devices developed by suppliers, including those developed using the MOCVD System. Huawei was and is not involved in the fabrication and manufacturing process and would thus have no direct interest in Veeco’s tools or recipes.

226 In my view, there was clearly no evidence supporting the NOK’s allegation that the deceased was in some position of conflict arising out of his concurrent involvement with both Veeco and Huawei. If this was indeed a source of anxiety to the deceased, it was quite clearly misconceived. As

alluded to earlier at [223], the deceased's perception of the true state of affairs was in all likelihood skewed by his psychiatric condition.

*The deceased's HDD*

227 The next key area of evidence that the NOK claimed pointed towards murder instead of suicide was in relation to the HDD. There are two aspects to this HDD, namely: (a) the documents on the HDD that were accessed on 23 June 2012 (the day before the deceased's body was found); and (b) those that were accessed on 27 June 2012 three days after his body was found). It should be noted that the no forensic examination on the HDD was conducted by the Singapore Police Force ("SPF") as the NOK refused to hand over the HDD. As such, the HDD was never produced in evidence for or during the CI. Forensic examination on the HDD was only conducted by Mr Massoud (the expert appointed by the NOK) (see [118] above), as well as the FBI pursuant to the SPF's request (see [126] above).

The access on 23 June 2012

228 Forensic examination on the HDD conducted by Mr Massoud revealed that the following files on the HDD were opened and viewed (without changing the actual contents of the folders) on 23 June 2012:

S/n	Files	Time
1	C\IME\My Documents\Research\NEMS Switch\Process Development	Between 3:40:50 to 3:42:23
2	C\IME\My Documents\Research\NEMS Switch\Project Plans \Electrostatic	
3	C\IME\My Documents\Research\NEMS Switch\IEDM	
4	C\IME\My Documents\Research\NEMS Switch\Summary	
5	C\IME\My Documents\Research\NEMS Switch	
6	C\System Volume Information\EfaData	

S/n	Files	Time
7	C:\System Volume Information\EfaData\sdmys_AB6CC62562B292B1A38FBD26	17:47:13
8	C:\System Volume Information\EfaData\sdmys_AB6CC62562B292B125E0EA64	
9	C:\System Volume Information\EfaData\SYMEFA.DB	

229 Mr Massoud explained that in his view, the results of the forensic examination of the deceased's HP Laptop conducted by ASP Soong showed that the HDD was *disconnected* from the deceased's HP Laptop at 3:39:58 on 23 June 2012. It was implied that the HDD must have been subsequently plugged into a device located at the deceased's apartment given the short time it took for HDD to be disconnected from the deceased's HP Laptop and connected to another device at 3:40:50. The ACER CPU used by the deceased at the IME therefore could not have been the device which the HDD was subsequently connected to. Mr Massoud also pointed out that ASP Soong's forensic examination of the deceased's Gateway Laptop showed no trace of any USB devices having been connected to it. As such, all these factors suggested that the HDD must have been connected to a device which was not known to be owned or possessed by the deceased.

230 It was evident that Mr Massoud's analysis hinged on the premise that the HDD was *disconnected* from the deceased's HP Laptop at 3:39:58 on 23 June 2012. He interpreted this particular point on the basis that the forensic examination conducted on the deceased's HP Laptop showed that the "Last Connected in Boot Cycle" time of the HDD was 3:39:58 on 23 June 2012. However, according to ASP Soong, the "Last Connected in Boot Cycle" time does not refer to the time that the HDD was *disconnected* to the HP Laptop, but instead refers to the time that the HDD was connected to it. ASP Soong also pointed out that the "Last Written" time which was saved in the registry

folder, namely 3:39:58 on 23 June 2012, refers to the time that the HDD was connected to the deceased's HP Laptop. In fact, that was the last occasion that the HDD was connected to the said laptop. In short, ASP Soong's opinion was that the forensic examination showed that the HDD was connected to the deceased's HP Laptop at 3:39:58 on 23 June 2012, and the files on the HDD that were accessed between 3:40:50 to 3:42:23 were accessed *whilst the HDD was still connected to the deceased's HP Laptop*. To put it another way, the HDD was *not* connected to some other unknown device when the files were accessed during this time.

231 After reviewing the evidence presented, I was more inclined to find that the HDD was accessed by the deceased on both occasions on 23 June 2012 for the following reasons. First and foremost, Luis Montes gave evidence that he had seen the deceased alive on 23 June 2012 from sometime after 5 pm and possibly close to 6 pm until about 7 pm (see [73] above). I saw no reason to doubt the veracity of Luis Montes' evidence. In addition to the fact that Luis Montes was the deceased's good friend, there was not a shred of evidence that Luis Montes had any motive or incentive to lie. Furthermore, ASP Soong's evidence as to the meaning of "Last Connected in Boot Cycle" would have been more authoritative since she was the person who had compiled the results of the forensic examination. It also did not seem logical for the term "Last *Connected* in Boot Cycle [emphasis added]" to be construed as the time that the HDD was *disconnected* as Mr Massoud claimed. It appeared to me that Mr Massoud had chosen to read "Connected" as "Disconnected" only because he was working on the premise that the files on the HDD was accessed by a third party and not the deceased. In other words, he had erroneously put the proverbial cart before the horse. For all these reasons, I found that it was extremely unlikely that the deceased's HDD had been accessed by some person other than the deceased on 23 June 2012 at 3:40:50

and 17:47:13. Instead, the evidence compels me to find that the deceased was the one who had accessed the files on the HDD on 23 June 2012.

The access on 27 June 2012

232 Next, I turn to the following files on the HDD that were accessed on 27 June 2012 between 20:38:39 to 20:40:28 (*ie*, three days *after* the deceased had passed away):

S/n	Files
1	C:\My Documents 2010-11-27\Miscellaneous
2	C\IME\M Documents\Goal Setting
3	C\IME\My Documents\IME\Supervisor
4	C\IME\My Documents
5	C\IME\My Documents\~\$characterization result to veeco.pptx (“the Veeco Powerpoint Temporary File”)

233 In particular, Mr Massoud pointed out that the Veeco Powerpoint Temporary File (which was not just accessed but also deleted), was dated 27 June 2012, while its correspondent parent file (“the Veeco Powerpoint Parent File”) was dated 22 June 2012. In Mr Massoud’s view, the discrepancy between the date of the Veeco Powerpoint Temporary and Parent Files could only be explained if the following steps were taken in the following order: (a) the Veeco Powerpoint Parent File was opened; (b) the HDD was removed; (c) the Veeco Powerpoint Parent File was closed thereafter; (d) the HDD was reinserted; and (e) the Veeco Powerpoint Temporary File was accessed and deleted. In Mr Massoud’s view, this showed that somebody had tried to conceal the fact that he or she had opened the Veeco Powerpoint Parent File on 27 June 2012. Related to this point was the NOK’s assertion that the HDD was not in IO Khaldun’s possession on 27 June 2012, since the deceased’s



parents claimed to have found the HDD at the deceased's apartment on 29 June 2012 (see [115] above).

234 In response to Mr Massoud's assertions, ASP Soong explained that the discrepancy pointed out by Mr Massoud could be reconciled in a different manner. The forensic examination conducted on IO Khaldun's Work Laptop showed that the operating system is Windows Vista Enterprise and the "Registry Key 4" is "NtfsDisableLastAccessUpdate". This effectively meant that the settings of IO Khaldun's Work Laptop were such that the "Last Access" date of a file would not be updated if the file was merely opened and not edited and saved, since such a function was disabled. To put it yet another way, it was normal for the "Last Access" date of the Veeco Powerpoint Parent File to remain recorded as 22 June 2012 even though the "Last Access" date of the Veeco Powerpoint Temporary File was changed to 27 June 2012.

235 Having considered the evidence, I was firstly satisfied that the HDD was in IO Khaldun's possession on 27 June 2012. Of great significance was the fact that the HDD was examined by the FBI (see [126] above), and the FBI had specifically confirmed in its report dated 9 May 2013 ("the FBI Report") that the HDD was last connected to IO Khaldun's Work Laptop at 8.36 pm on 27 June 2012. The relevant portions of the FBI Report are reproduced below:

On 11 April 2013, FBI Legal Attaché Singapore received TCFB/0196/2013 from SPF, which described the forensic examination of an "HP Elitebook 2450p Laptop. As part of this report, the Investigating Officer requested a search for a list of USB connected devices. A review of this list identified a Seagate Free Agent Go USB Device, *serial number 2GE18WCK*. It was noted *the Seagate was last connected to this Laptop on 27 June 2012, at 08:36PM*.

Based on the digital evidence provided by the SPF and the identified file ... *the FBI concludes the Seagate external hard drive provided by the Todd family to FBI Salt Lake City on 25*

*March 2013, is identical to the Seagate external hard drive examined by the SPF on 27 June 2012.*

[emphasis added]

ASP Soong confirmed that the HDD bearing the serial number “2GE18WCK” as mentioned in the FBI Report, is the same HDD bearing the serial number “2GE18WCK&0” found to be connected to IO Khaldun’s Work Laptop on 27 June 2012 at 8.36 pm during the forensic examination. The additional “&0” characters noted during the forensic examination of IO Khaldun’s Work Laptop were merely the result of the operating system’s way of presenting and storing the serial number.

236 In addition to the FBI Report, I also took into account the fact that as set out earlier at [106] above, Mary Todd had acknowledged the receipt of the HDD from IO Khaldun on 28 June 2012. I noted that the make and serial number of the HDD was not identified in the Acknowledgement Slip, but this was of little significance since there was ultimately only *one* HDD that ever surfaced in this matter. It seems to me that the deceased’s parents might have inadvertently mixed up the items that they received from IO Khaldun with the items that they took from the deceased’s apartment.

237 Having found that the HDD was indeed in IO Khaldun’s possession on 27 June 2012 and that he was the one who had accessed some of the files contained within at 8.36 pm that day, I turn now to consider if there was anything suspicious about the access, and, in particular, the deletion of the Veeco Powerpoint Temporary File. On this point, the FBI had confirmed in the FBI Report that temporary files “are created by Microsoft Office products when their corresponding file is opened and then deleted when the corresponding file is closed”. This was a point that ASP Soong agreed with, and she further explained that the creation and deletion of temporary files was

automatic. IO Khaldun also confirmed that nobody else could have had access to the HDD, and that he did not delete, insert, or amend any file on the HDD.

238 There was also compelling evidence that there was nothing confidential, classified or otherwise sensitive about the Veeco Powerpoint Parent (and Temporary) File. The Veeco Powerpoint was prepared by Weizhu and it essentially consisted of three slides. The first slide included “information and results of layer structure, XRD, bowing and Hall measurement”. The second slide included “the results of XRD curve, cross section TEM image, PL and Raman data”. The third slide gives “the UV Raman data, with some discussion about Aluminium concentration of the Aluminium Gallium Nitride barrier”.

239 Weizhu explained that the IME had purchased the MOCVD System from Veeco together with some GaN-on-Silicon wafers. The GaN-on-Silicon wafers arrived as early as March 2012, but the MOCVD System only arrived in July 2012 (see [38] above). During the Veeco Training, some demonstration wafers were grown by Veeco engineers using the MOCVD System. Veeco then couriered about 50 pieces of the demonstration wafers to the GaN Group sometime in March 2012. Together with Surani, Weizhu conducted tests on the demonstration wafers to obtain its characterisation results so as to establish the quality of the demonstration wafers. After the characterisation results of the demonstration wafers were obtained, the IME provided some feedback, *via* a telephone conference on 31 May 2012, to Veeco’s engineers. In response to Veeco’s engineers’ request for these characterisation results, Weizhu prepared the Veeco Powerpoint and sent it *via* email to them on 31 May 2012. However, Veeco’s engineers were unable to open this and informed the GaN Group on 1 June 2012. As Weizhu was away on leave then, the deceased had

helped her to send the Veeco Powerpoint to the Veeco Engineers again that same day *via* email.

240 Weizhu also pointed out that the information contained in the Veeco Presentation was subsequently published in WZ Wang *et al*, “Raman Scattering and PL Studies on AlGaIn/GaN HEMT Layers on 200 mm Si (111)” (2012) World Academy of Science, Engineering and Technology 69 at pp 1108 to 1111. She confirmed that this publication is available to researchers generally and that there was nothing special or sensitive about the information contained in the Veeco Presentation.

241 For the abovementioned reasons, I was fully satisfied after considering all the evidence that there was nothing remotely suspicious associated with the access of the files on the HDD on both 23 and 27 June 2012.

#### *Possible types of foul play*

242 As explained in the above sub-sections, I was satisfied on the basis of all the evidence before me that the points raised by the NOK in support of their contention that there was foul play involved in the deceased’s death were all not made out. For completeness, I will nevertheless go on to consider, reasons and motives aside, whether the evidence was consistent with the possibility of foul play.

243 I turn firstly to the possibility of foul play by way of a physical attack on the deceased to render him unconscious (other than by garroting, taser or carotid arm lock, which had already been ruled out). I noted that the police officers found no evidence of a struggle and/or ransack in the deceased’s apartment. I did not find these points to be necessarily probative as: (a) the signs of a struggle could be easily rectified; (b) the deceased could have been

attacked in some other location; and (c) the alleged attacker might not have been interested in the deceased's belongings at all. However, what *was* crucial was the fact that the deceased did not have any other injuries other than the ligature mark (see [151] to [158] above), as well as the fact that there were no suspicious marks found on the deceased's body to indicate that the deceased's body had been moved around to suspend him from the ligature after unconsciousness (see [162] above).

244 Next, the possibility that there was some form of chemical or biological attack on or intrusion into the deceased's body to render him unconscious could also be ruled out as the results of the analysis of the deceased's blood and urine samples showed that nothing suspicious was detected in his system:

Sample of peripheral blood (oxalated)	
Alcohols and volatiles	Not detected
Sample of peripheral blood (plain)	
Acidic and neutral drugs	Not detected
Basic drugs	Not detected
Benzodiazepines	Not detected
Urine sample	
Alcohols and volatiles	Not detected
Basic drugs	Not detected
Opiates	Not detected

On this point, it was also significant again that there were no suspicious marks found on the deceased's body to indicate that the deceased's body had been moved around to suspend him from the ligature after unconsciousness (see [162] above).

245 As for the possibility that the deceased was forced, by way of physical duress (*eg* though knife or gun point), to hang himself, I was of the view that this was inconceivable as the deceased (a fit young male with wrestling experience) would surely have attempted to fight back and sustain some form of defensive injury in the process. I was also of the view that the deceased could not have been under some form of emotional duress (*eg* threat to harm his family or girlfriend) to harm himself. There was no hint of any evidence of this possibility. On this point, I also took into consideration the fact that the keyword searches using the words “kill”, “murder”, “threaten”, “fear”, “danger”, “worry”, “concern”, “threat”, “safety” and “espionage” made by ASP Soong during the forensic examination of the deceased’s HP Laptop did not reveal any results. It was also relevant to both possible forms of duress that the PDF Note (reproduced at [90] above) was inconsistent with the possibility that it was written by someone else other than the deceased (see the full discussion at [193] above).

246 As such, for all these reasons, I was satisfied that not only was there no reason or motive for foul play, the available evidence was inconsistent with the possibility of foul play being involved in the deceased’s death.

### ***The deceased’s mental state***

247 I move on now to consider the next area of evidence, namely, the evidence pertaining to the deceased’s mental state. The diagnosis of the deceased suffering from a relapse of his depression with a significant component of anxiety was set out earlier in [57] to [60]. For the purposes of determining whether the deceased had committed suicide, one of the relevant considerations was whether the deceased was still suffering from depression and anxiety at the time he died. It must be emphasised at the outset that this is

just one of the several factors to consider, as there is no basis to say that a psychiatric condition, without more, must necessarily be associated with suicidal ideations and/or suicide.

248 I was prepared to find that the two EK and 17 EL Tablets were indeed probably part of the 28 Prescribed Lexapro Tablets prescribed by Dr Lee for the following reasons. First, the 17 EL Tablets (which were clearly Lexapro tablets as they were in blister packages marked with the word “Lexapro”) and the two EK Tablets were all found in the same Medicine Bottle. The analysis of the EK and EL tablets also confirmed that these tablets contained Citalopram, which is the active substance in Lexapro. The EK Tablets were also marked exactly like the 5 mg Lexapro tablets. Dr Lee was unable to confirm for sure, but said that it was possible that the two EK and 17 EL Tablets found by the deceased’s parents at his apartment on 29 June 2012 were indeed part of the Prescribed Lexapro Tablets. I was satisfied, on the basis of the aforementioned reasons, that this was in all likelihood indeed so.

249 By implication, therefore, the deceased had probably only taken (at the most): (a) six out of the prescribed eight Lexapro (5 mg) tablets; and (b) one of the prescribed 18 Lexapro (10 mg) tablets. In Dr Lee’s view, this amount of medication would not have been sufficient to address the deceased’s moderately severe depression with a significant component of anxiety, and this was so regardless of whether the seven Lexapro Tablets were taken continuously at a stretch or intermittently. In fact, Dr Lee would usually continue treatment for at least six months after a patient gets well. I was therefore compelled me to find that the deceased’s psychiatric condition was in all likelihood untreated and that he was consequently in a depressed and anxious mental state during the period before he died.

250 What was also objectively telling of the deceased's mental state in the last few months of his life was his activity on the internet. Keyword searches on the words "noose", "hangman", "methods", "knots", "psychiatric", "short drop", "simple suspension", and "suicide" made by the police during the forensic examination into the HP Laptop revealed that deceased had visited suicide-related websites on 19 different days between 10 March 2012 and 23 June 2012. The details are set out in the table below:

S/n	Time	Summary of search/webpage
<b>10/3/12</b>		
1	23:01	One of the searches was on how to tie a hangman's noose
<b>11/3/12</b>		
2	08:54	One of the searches was on how to tie a hangman's noose
<b>19/3/12</b>		
3	22:26	How-To-Tie-a-Hangmans-Noose-Knot
4	22:27	How-To-Tie-a-Hangmans-Noose-Knot
5	22:30	How-To-Tie-a-Hangmans-Noose-Knot
6	22:41	Information on "owen-wilson-attempts-suicide-during-bout-with-depression"
<b>21/3/12</b>		
7	20:15	Information on tombstone
8	20:15	Information on tombstone
<b>24/3/12</b>		
9	15:48	Information on "suicide-men"
10	15:55	Information on "suicide-myth-fact"
<b>7/4/12</b>		
11	8:03	Greece-suicide-memorial-video-tease
<b>7/5/12</b>		
12	21:34	Wikipedia page on "List_of_unusual_deaths"
<b>11/5/12</b>		
13	6:21	Mike Tyson's daughter dies in treadmill tragedy
<b>12/5/12</b>		



S/n	Time	Summary of search/webpage
14	14:50	How to tie a hangman's noose
15	14:50	Wikipedia page on how to tie a hangman's noose
16	14:51	Picture of how to tie a hangman's noose
17	15:29	Google search on "Singapore+deceased+estate"
18	15:30	Insolvency and Public Trustee's Work Website: Information on what to do with CPF monies after one dies
29	15:30	Intestate Succession Act on statutes.agc.gov.sg
20	15:36	Google search which led to an article "Singapore's suicide rate increases"
21	15:36	Google search on "Singapore+suicide+law"
22	15:37	Wikipedia page on death in Singapore
23	15:39	Wikipedia page on suicide legislation
24	16:15	Wikipedia page on suicide methods
25	16:16	Wikipedia page on suicide
26	16:47	Wikipedia page on suicide note
27	16:47	Suicide note
28	16:47	Kleist_suicide_letter
29	16:47	The_Death_of_Socrates.
30	16:50	Insolvency and Public Trustee's Work Website: Information on what to do with CPF monies after one dies
<b>13/5/12</b>		
31	7:55	One of the searches was on how to tie a hangman's noose
32	15:55	Article on what happens to someone after they attempt suicide and whether they are forced to stay in a facility until they're deemed 'stable'
<b>18/5/12</b>		
33	21:09	One of the searches was on how to tie a hangman's noose
<b>20/5/12</b>		
34	10:32	Google search on "american+couple+suicide+in+rome"
35	10:32	Article on "US couple's planned suicide in Rome goes thwarted by hotel staff"
36	10:33	Google search which led to an article "US couple's planned suicide in Rome goes thwarted by hotel staff"

S/n	Time	Summary of search/webpage
37	10:33	Google search which led to an article “Christian perspectives on suicide”
38	10:33	Article on “Christian perspectives on suicide”
39	10:44	Google search on “american+suicide+in+asia”
40	10:44	Article on “Suicide rates high among Asian-Americans”
41	10:50	Google search which led to an article “Suicide rates high among Asian-Americans”
42	10:50	Google search on “american+expat+suicide”
43	10:51	Google search which led to an article on “Reporting of Suicides by American Expats in Costa Rica can be inaccurate”
44	10:51	Article on “Reporting of Suicides by American Expats in Costa Rica can be inaccurate”
45	10:51	Google search which led to an article “Reporting of Suicides by American Expats in Costa Rica can be inaccurate”
46	10:55	Article on “Suicide: the Fourth-leading cause of American deaths abroad”
47	11:04	Google search on “american+suicide+Singapore”
48	11:04	Website of the Embassy of the United States, Singapore, on “Report of Death of a U.S. Citizen Abroad”
49	11:06	Google search which led to a webpage “Embassy of the United States, Singapore”, on “Death”, and “Report of Death of a U.S. Citizen Abroad”
50	11:06	Sammyboy.com forum page on a forum thread titled “Singapore suicide rate is 4Xs that of entire US ARMY at WAR!”
51	11:07	Google search which led to a sammyboy.com forum page on a forum thread titled “Singapore suicide rate is 4Xs that of entire US ARMY at WAR!”
52	11:08	Wikipedia page on “List of countries by suicide rate”
53	11:09	Google search which led to Wikipedia page on “List of countries by suicide rate”
54	11:09	Google search which led to article “Study shows causal link between Protestantism, Suicide”
55	11:10	Article on a study which shows causal link between protestanism and suicide, on the Christian post Singapore

S/n	Time	Summary of search/webpage
56	11:11	Article on a study which shows causal link between protestanism and suicide, on the Christian post Singapore
57	15:11	Google search on how to tie a hangman's noose
<b>22/5/12</b>		
58	20:18	How to tie a hangman's noose
<b>27/5/12</b>		
59	14:33	Article on "Mark Madoff Suicide: Bernie Madoff's Son Found Hanged In NYC Apartment"
<b>5/6/12</b>		
60	7:04	Website on suicide prevention
<b>9/6/12</b>		
61	18:48	Article on victim of sexual abuse contemplated suicide
<b>21/6/12</b>		
62	7:36	Article "Dutch man falls off skypark at Marina Bay Sands"
63	7:37	Google search which led to an article "Dutch man falls off skypark at Marina Bay Sands"
64	7:38	Google search which led to an article "Dutch tourist jumps to death from MBS skypark"
65	7:39	Google search on "marina+bay+sands+jump+dutch"
66	7:40	Article on "Death tent spotted at Marina Bay Sands after tourist falls from Skypark"
67	7:40	Article on "Death tent spotted at Marina Bay Sands after tourist falls from Skypark"
68	7:41	Google search on "american+death+singapore"
69	7:41	Article on "American woman fell 60 storeys to her death at Swissotel the Stamford"
70	7:42	Article on "us-guest-falls-60-floors-to-her-death-at-landmark-singapore-hotel"
71	7:42	Article on "American woman fell 60 storeys to her death at Swissotel the Stamford"
72	7:42	Google search which led to an article on "American woman fell 60 storeys to her death at Swissotel the Stamford"
73	22:18	Yahoo news on "Body found outside Marina Bay Sands hotel"

S/n	Time	Summary of search/webpage
		lobby”
74	22:20	News on “marina bay sands skypark” (Note: Dutch man falls off skypark at Marina Bay Sands)
<b>22/6/12</b>		
75	1:06	Google search on “American+jumps+Singapore”
76	1:06	Google search on “American+dies+in+singapore”
77	1:10	Google search which led to an article on “American dies in fatal fall from Swissotel The Stamford”
78	1:10	Google search which led to an article on “American dies in fatal fall from Swissotel The Stamford”
79	1:12	Article on “American dies in fatal fall from Swissotel The Stamford”
80	7:03	Article on “German tourist falls to death from MBS skypark”
<b>23/6/12</b>		
81	13:59	Google search which leads to the article on “Top 10 common methods of suicide”
82	13:59	Article on “Top 10 common methods of suicide”
83	14:04	Article on “Top 10 common methods of suicide”
84	14:05	Google search which led to the website “ <a href="http://lostallhope.com/suicide-methods">http://lostallhope.com/suicide-methods</a> ”
85	14:05	Information on suicide methods on the website lostallhope.com
86	14:08	A webpage with an article titled “The Ten Minute Suicide Guide”
87	14:08	A webpage with an article titled “The Ten Minute Suicide Guide” which provides information on suicide methods such as “slitting your wrists, shooting yourself, overdose, hanging, throwing yourself in front of a speeding train or car”
88	14:23	Research on suicide methods
89	14:40	Article on “What’s the best method for a painless suicide”
90	14:41	Google search which led to an article on “What’s the best method for a painless suicide”
100	14:41	University of Oxford’s website on Centre for Suicide Research, with an article “Methods used for suicide”
101	14:41	A webpage from the University of Oxford, Centre for Suicide Research. This webpage provides information on suicide methods

S/n	Time	Summary of search/webpage
		such as hanging, use of firearms, co-proxamol poisoning, self poisonings.
102	14:43	Google search which led to University of Oxford's website on Centre for Suicide Research, with an article "Methods used for suicide"
103	14:45	Webpage on "Why do Singaporeans commit suicide"
104	16:32	Webpage on "Why do Singaporeans commit suicide"
105	16:34	Google search on "why do people commit suicide"
106	16:37	Sammyboy.com forum page on a forum thread titled "Japanese man stabs himself to death"
107	16:38	Sammyboy.com forum page on a forum thread titled "24 years old SAF regular hanged himself at Changi Airbase, what's happening Singaland?"
108	16:39	Information on "SAF 2SG commits suicide"
109	16:39	Sammyboy.com forum page on a forum thread titled "SAF 2SG commits suicide"
110	16:39	Sammyboy.com forum page on a forum thread titled "21 year old poly beauty hang herself in her parent's semi-d in sembawang"
111	16:41	Google search which led to a sammyboy.com forum thread on "Singapore suicides"
112	16:42	Webpage on "PRC student on scholarship committed suicide in NTU"
113	16:43	Webpage with "suspected-suicide-at-ntu-hostel"
114	16:43	Google search which led to an article on Singapore News Alternative, "PRC student on scholarship committed suicide in NTU"
115	16:45	Google search on "suicide singapore"
116	16:45	Google search which led to an article "Bangladeshi man, Filipino maid found dead in Geylang hotel"
117	16:45	Google search on "suicide methods"
118	16:45	Wikipedia page on Teh Cheang Wan, an architect in charge of the HDB as Minister for Development of Singapore, who committed suicide due to an overdose of amytal barbiturate
119	16:48	Forum thread on "Teenage girl commits suicide at Ang Mo Kio"

S/n	Time	Summary of search/webpage
120	16:49	Forum thread on “Teenage girl commits suicide at Ang Mo Kio”
121	16:50	Singapore Haunted Season 2 Episode 12: Pasir Ris Suicide Tower
122	16:50	A google search which led to a sgforums thread on “Teenage girl commits suicide at Ang Mo Kio”
123	16:52	Official Singapore Haunted facebook page
124	16:52	Google search that leads to Singapore Haunted Season 2 Episode 12: Pasir Ris Suicide Tower
125	16:52	Video on “Singapore Haunted Ghosts In The Work ”
126	16:54	Yahoo news on an actress Jung Ah-yul who committed suicide
127	16:55	Yahoo news on “S. Korean banker found dead in apparent suicide”
128	16:55	Google search on “suicide singapore”
129	16:57	Google search which led to the wikipedia page on “Suicide in the United States”
130	16:57	Wikipedia page on “Suicide in the United States”
131	17:01	Wikipedia page on Anderson Cooper, an Merican journalist, author and television personality, who had an older brother, Carter Canderbilt Cooper, who committed suicide
132	17:10	Dutchman falls off skypark in marina bay sands (body of dutch man)
133	17:10	“Find A Grave” is a free resource for finding the final resting places of famous folks, friends and family members
134	17:12	Interview With Anderson Cooper, who had an older brother, Carter Canderbilt Cooper, who committed suicide
135	17:35	Wikipedia page on Anderson Cooper, an Merican journalist, author and television personality, who had an older brother, Carter Canderbilt Cooper, who committed suicide
136	17:47	Forum post on “Singapore suicides”
137	17:47	Google search on “US guest falls 60 floors to her death at landmark Singapore Hotel”
138	17:47	Forum post on “Dutch tourist jumps to death from MBS skypark”
139	17:47	Article titled “US guest falls 60 floors to her death at landmark Singapore Hotel”
140	17:47	Article titled “Death tent spotted at Marina Bay Sands after tourist falls from Skypark”

251 I noted that the deceased's internet activity as shown above was consistent with his personal situation and the manner that he was found dead. A quick scan of the searches/webpages listed above showed that the deceased was particularly interested in the suicides of foreigners in Singapore. The deceased had also read up on the religious aspect of suicide (see for example, items 37 to 38 and 54 to 56 in the table set out at [250] above), and this was consistent with his family members being Christians and him allegedly returning to his faith in the last few months of his life. I also noted that the deceased had made a google search on 12 May 2012 using the search terms "Singapore+suicide+law" which would be consistent with his note addressed to "Everyone" in which he said that he understood that suicide is a crime in Singapore (see [90] above). It was also significant that the deceased had read up fairly extensively on suicide by hanging, and, in particular, how to tie a hangman's noose, as that was the manner in which he was found dead on 24 June 2012. In particular, the construction of the hangman's noose at the end of the strap which was found around the deceased's neck was consistent with the picture guide and video link on how to tie a hangman's noose in the Wikipedia webpage visited by deceased on seven occasions, namely on 10 and 11 March 2012 and 12, 13, 18, 20 and 22 May 2012. Although that particular Wikipedia page had recommended 13 turns and there were only 3 turns found on the hangman's noose in the actual strap found around the deceased's neck, that Wikipedia page had also mentioned that any other number of turns can also be used although an odd number of turns was recommended.

252 Furthermore, as alluded to earlier at [195], the forensic examination conducted on the deceased's HP Laptop showed that the deceased had started drafting a suicide note more than a month before he died. The following text fragment had been typed on or before 18 May 2012 at about 9.48 pm, and subsequently discarded ("the discarded note to Shirley"):

Dear Shirley,

I can't express how much you have meant to me while I have been here. You have been the one source of happiness for me and I only hope that I gave you half as much joy as you gave me. I am so sorry that you have found me this way. I have been experiencing problems that I have not fully explained to you and these are problems which I don't know how to fix. I quit my job because I wasn't capable of executing what was required of me. And if I went back to the US I foresaw that I would have the same difficulties there. I have been constantly unhappy, and my unhappiness has affected my ability to think properly and solve problems. I am supposed to be someone whose job it is to solve problems, but I am not capable. I am sorry. Like I told you before, you are an angel. You are beautiful, smart and talented and you deserve and will achieve a very bright future. Please contact my family for me. I hope you can visit them in the U.S. if you are able to do so. I leave all of my money to you from my Citibank.

253 In addition, ASP Soong gave evidence that the forensic examination of the deceased's HP Laptop established that the PDF Note (reproduced at [87] above) was created on the HP Laptop and was first saved in ".docx" format on 26 May 2012 at about 3.46 pm and later converted into PDF format on 27 May 2012 at about 8.40 am. The NOK's attempts at discrediting the PDF Note had earlier been considered and rejected at [181] to [197] above. The substance of the contents of the PDF Note was clearly consistent with suicidal ideations.

254 Text messages exchanged between the deceased and Shirley on 26 and 27 May 2012 showed that the deceased was somewhat socially withdrawn on those days, and this was in turn consistent with the idea as suggested by the deceased's preparation of the PDF Note on those days that he was suicidal:

From	To	Date and time	Text message
The deceased	Shirley	26/05/12; 4:31 pm	Hey Shirley I am not feeling too good tonight ... can we meet up tomorrow?
Shirley	The deceased	26/05/12; 4:32 pm	Okay what happened?



From	To	Date and time	Text message
The deceased	Shirley	26/05/12; 4:32 pm	Just got a bad headache
Shirley	The deceased	26/05/12; 4:36 pm	Okay rest well
The deceased	Shirley	26/05/12; 4:36 pm	Thanks Shirleychan :)
Shirley	The deceased	26/05/12; 4:47 pm	Just let me know if there's anything I can do to help
The deceased	Shirley	26/05/12; 4:53 pm	Ok thanks sweetheart
Shirley	The deceased	26/05/12; 4:56 pm	:)
Shirley	The deceased	27/05/12; 8:09 am	Morning :) Are you still having a headache? What time do you want to meet up?
The deceased	Shirley	27/05/12; 3:26 pm	Hey Shirley I am so sorry but I am still not feeling well. Can we hang out next week?
Shirley	The deceased	27/05/12; 4:58 pm	It would really make me happy if you wouldn't make plans and cancel the last minute. I understand that you are going through a lot but time shouldn't be wasted especially now that we have so little of it. I want you to know that it makes me happy to be in the same room as you. It doesn't matter whether you are happy, sad or too grumpy because you have a bad headache. I love you too. I was just too pissed a while ago to say it back.

From	To	Date and time	Text message
The deceased	Shirley	27/05/12; 5:05 pm	I know it isn't fair to you to make plans and then cancel last minute. I can't tell you enough how sorry I am. I just can't explain fully what I am going through. You make me so happy too. I am sorry I haven't been showing it. I do love you dearly.
Shirley	The deceased	27/05/12; 5:31 pm	I know I can't fix your problems but I'm here if you need someone to listen. You are a good man. I am happy that you are in my life. Get some rest :)
The deceased	Shirley	27/05/12; 5:32 pm	I know you are there for me and appreciate you so much

I pause here to mention that the contemporaneous of these text messages and the deceased's activity on his HP Laptop in saving and converting the PDF Note on 26 and 27 May 2012 further fortified my finding that the PDF Note could not have been created and/or planted in the deceased's HP Laptop by someone else (see [176] above). I should also clarify that I did, in my assessment of the text messages, take into consideration the fact that the deceased's social withdrawal from Shirley could have also been partially due to their impending separation when he returned to the US. Nevertheless, a holistic assessment of the overall tenor of the deceased's social withdrawal against the background of his computer activity was consistent with the notion that he was truly suicidal.

255 The evidence discussed thus far at [247] to [254] above seem to suggest that the deceased had suicidal ideations at least from 10 March 2012 onwards. Yet, the deceased had said during the consultation with Dr Lee on 4 April 2012 that he did not feel that life held no meaning and that he did not

have any suicidal ideations (see [59] above). Could this inconsistency be satisfactorily reconciled? According to Dr Lee, it was possible that the deceased had masked his suicidal ideations from him during the 4 April 2012 consultation, particularly since it was the deceased's first consultation with him. That said, Dr Lee also opined that not a great number of patients would have been able to mask their suicidal ideations from a trained psychiatrist like himself. Dr Lee also emphasised that a suicide risk assessment is time-sensitive in that it is only valid for the period of time that a patient is seen, and even then, the suicide risk assessment cannot predict with perfect accuracy whether a patient would commit suicide because of the many factors at play. Dr Lee also confirmed that closer to the date of death, people who go through with their suicidal ideations are less likely to verbalise them to the people around them. After being informed of the dates when the deceased had made internet searches on suicide-related websites and the overall duration of these searches, Dr Lee said that he would have to postulate that suicidal ideations were potentially going on in the deceased's mind. Having carefully considered Dr Lee's evidence which I found to be cogent and credible, I was satisfied that the difference between what the deceased had told Dr Lee on 4 April 2012 (*ie*, that the deceased had no suicidal ideations) and the evidence that suggested otherwise, could be properly reconciled.

256 To sum up momentarily at this juncture, I was satisfied that the deceased had, as a result of his psychiatric condition, entertained suicidal ideations of overall increasing severity in the months leading up to his death.

***The scene found on 24 June 2012***

257 I now turn to consider the evidence found at the scene.

258 The results of the simulation experiments carried out by Ms Lim Chin Chin (“Ms Lim”), the Senior Consultant Forensic Scientist of the HSA, confirmed that it was physically possible for the deceased to have hung himself from the master bedroom toilet door without assistance from other persons by performing the following steps. First, the deceased would have had to depress the push button located on the door knob of the master bedroom toilet door from the inside of the toilet, without closing it. Next, the deceased would have had to secure one end of the black strap around his neck, over the small white towel, by tying a hangman’s noose. The hangman’s noose would have allowed the deceased to adjust the loop size to a size adequate for putting it over his head, and to tighten the loop around his neck. Following that, the deceased would have had to secure the other end of the strap, which consisted of the male and female buckle members of a side release buckle and a stack of knots (a Z-overhand knot, an S-hitch, an S-overhand knot followed by a Z-overhand knot) (“the stack of knots”) over the top edge of the master bedroom toilet door, by standing on the wooden chair. Thereafter, the deceased would have had to close the toilet door to lock it, while still standing on the chair. Lastly, the deceased would have had to kick the chair away using his feet to be suspended from the hangman’s noose.

259 Based on the results of other simulation experiments, Ms Lim also confirmed the following key points. Firstly, straps very similar to the strap used by the deceased were stretched when subjected to loads similar to the deceased’s weight, and the amount of stretching observed was such that the deceased’s feet would have reached and be flat on the master bedroom floor. Secondly, the state of the wooden chair as originally found at the scene by Shirley and the first police officers (*ie*, 1.3 to 1.5 metres away from the master bedroom toilet door, upright, and on a large white towel), was consistent with the deceased pushing such a chair away while standing on it. The location and

directionality of the scratch marks found on the master bedroom floor caused by the kicking of the chair during the simulation experiments were consistent with the marks found on the master bedroom floor. These marks were still present when I visited the apartment on 13 June 2013. Lastly, the indentation marks on the top edge of the inside and the outside of the toilet door found beneath where the black strap was located at the scene was consistent with the damage observed in the simulation experiments where a weight similar to that of the deceased's was suspended for 20 minutes on replica straps.

260 I noted that there were, of course, limitations and qualifiers to the simulation experiments carried out by Ms Lim. One of the main differences was that the chairs used in the simulation experiments were not the same as that found at the crime scene, as it was no longer available. Ms Lim, however, confirmed that the experiments done on a range of chairs showed that the weight and design of the experiment chairs did not have a significant effect on the final positions of the chairs.

261 I also considered that although the replica straps were of widths similar to the actual black strap used by the deceased and were made of the same material, the construction of the replica straps (*ie*, the weave patterns of the underlying yarn) and the number of yarns across the width of the replica straps was different. I therefore accepted that the results of the simulation experiment would not be on all fours with what actually happened to the deceased and that a small degree of variation had to be factored in. I was prepared to accept only a "small" degree of variation as I noted that Ms Lim had conducted the experiments using a range of variables, and this would have the effect of bolstering the accuracy and reliability of her conclusions. In particular, I was satisfied that the deceased's feet would have touched the floor as a result of the stretching of the black strap in question, as this was found to be so *even*

*with replica straps that were 5 cm shorter than the actual strap used by the deceased.*

262 Hence, having regard to the entirety of the simulation experiments (including all the limitations and qualifiers), which I found to be fair and reliable, I was satisfied that the scene found on 24 June 2012 was consistent with that of the deceased having committed suicide on his own, without the assistance of any other persons. Given the size and weight of the deceased, I also accepted Ms Lim's assessment that it would have been very difficult, even if there had been two or more persons, to lift up and hang the body of the deceased in the manner in which he was found. Ms Lim's assessment further reinforced my ruling out the possibility that the deceased may have been hung up after being rendered unconscious (see [243] above).

263 In my view, the fact that the DNA of two unknown persons (in addition to the deceased) was found on the black strap and the small white towel found around the deceased's neck, was ultimately neither here nor there. Mr Kua Guo Wei, an Analyst with the DNA Profiling Laboratory of the Biology Division at HSA, gave evidence that a person could leave his DNA on an article, be it a strap or towel, through a variety of methods, including a mere touch, and this DNA could remain on the article for some time, possibly even years, even after the article had been washed. At this stage of technology, the tests were unable to establish when the DNA was deposited on the strap and towel, whether the DNA on the strap and the towel belonged to the same person, and whether the DNA on the strap and the towel had been left at the same time. The evidential value of the fact that the DNA of two unknown persons was found on the black strap and small white towel was thus limited.

264 This leads me to my next point about the NOK's suggestions to the effect that their ability to show that there had been foul play involved was prejudiced by their inability to obtain certain evidence as a result of: (a) the omission by the police to take DNA swabs at the scene; (b) the omission by the police to dust for fingerprints; and (c) the alteration of allegedly material aspects of the scene by the police (*vis*, the cutting of the black strap, the moving of the wooden chair and the access of the deceased's HP Laptop by SSI Rayme). However, since the possibility of foul play was already inconsistent with the *available* evidence (see the reasoning at [242] to [245] above), I was of the view that these points were not, in the final analysis, material points. My views on this issue might have been different, if, say, *both* the possibility of suicide and foul play were consistent with the available evidence, and the taking of DNA swabs, the dusting of fingerprints and the exact preservation of the crime scene would therefore have made a difference to the findings. As that was not the situation here, it was not appropriate to construe these points in favour of the NOK's case.

265 Having regard to the fact-finding (and not fault-finding) nature of the CI (see [3] to [4] above), I should also add, on a separate but related note, that it is not for me at this forum to make findings on the appropriateness or adequacy of the standard operating procedures of the SPF, or on the conduct of the police officers in carrying out their investigations the way that they did. These are ultimately matters within the remit of the relevant authorities and the internal review mechanisms of the SPF. While I accept that the police officers had exercised their discretion to make certain judgment calls in this case (which I found no reason to disagree with based on the circumstances and available evidence), there should perhaps be more guidelines put in place and/or enforced to govern such exercise of discretion.

266 Following from the tangent of this separate but related point is yet another point which I think is appropriate to address at this juncture. This is in relation to the differing accounts between the NOK (more specifically, Richard and Mary Todd) and IO Khaldun as to what IO Khaldun had represented to them on 27 and 29 June 2012 (see above at [102], [111] and [112]). According to the NOK, IO Khaldun's account of how the deceased took his life (*ie*, that it involved, amongst other things, holes, bolts, ropes, and/or pulleys) was suspiciously different from the account presented in court. In my view, there was absolutely no reason at any time for IO Khaldun to have represented to the NOK what the NOK claimed he did. Specifically in relation to the meeting between the NOK and IO Khaldun on 27 June 2012, it was significant to me that the only other person privy to the discussion, namely Ms Goins, did not provide to the court any reason why she was unable to come forth to confirm if the NOK's version of events was indeed true. As for the meeting on 29 June 2012, I accepted IO Khaldun's evidence that he had denied talking about holes, bolts, ropes and/or pulleys during the meeting on 27 June 2012, and that he did not try to reconcile the scene with the alleged account. The disconnect between what IO Khaldun actually said and what the NOK heard on both 27 and 29 July 2012 could, in my view, be explained by a miscommunication which was compounded by the fact that the NOK were (very understandably) in an emotional state and Mary Todd, in particular, had not slept in many days (see the evidence of the deceased's friends and Dylan Todd at [113] and [114] above). For these reasons, I accepted IO Khaldun's evidence that he did not, at any time, represent to the NOK the account that they had alleged as set out in [102] and [111] above.



*Other circumstantial evidence*

267 I now turn to consider other circumstantial evidence that do not directly suggest that foul play was involved but on the face of it seem to militate against the finding of suicide. In particular, I noted that the deceased: (a) had made plans to stay with his friend, Mr Bart Richard Lendrum (“Bart”), over the weekend before he was due to return to the US; (b) was in the midst of packing to return to the US; (c) had accepted a job offer in the US by Nuvotronics; and (d) requested that his family hold off Father’s Day and Dylan Todd’s birthday celebrations until he returned to the US. In my view, these were all neutral points at best as they did not necessarily point to one possibility over another. I will elaborate more below.

268 Firstly, Bart’s evidence in court was that he had offered the deceased a place to stay but the deceased had never made any firm plans in response to that offer. I actually found this rather curious and somewhat inconsistent with the idea that deceased was all set to return to the US. The deceased would have had to vacate his apartment and stay with Bart (or somewhere else) for the weekend before his flight back home if indeed that was his plan. Yet, up till the time of his death, the deceased did not make any firm plans to stay with Bart that weekend, nor did he inform Bart that he would be staying at some other place.

269 Next, the fact that the deceased had decided to return to the US and had a new job and a reunion with his family planned was also not necessarily inconsistent with the possibility that he had committed suicide. Firstly, in the discarded note to Shirley (reproduced at [252] above), the deceased had stated, “I quit my job because I wasn’t capable of executing what was required of me”. This statement was consistent with the evidence of the deceased’s friends

and colleagues that he found working in the GaN field of technology very challenging as he did not have prior experience in this field of research. Dr Lee agreed that this statement suggested a sense of failure consistent with major depression. The deceased went on to state, “if I went back to the US I foresaw that I would have the same difficulties there”, and Dr Lee agreed that this statement suggested that the sense of failure had gone very deep. Dr Lee also said that a new job and changing country could also have been sources of stress for the deceased. It was also significant that the deceased had stated in the first page of the PDF Note (reproduced at [90] above) that, “I have tried to get jobs in the U.S. but I know I am not capable of fulfilling the duties required of me”. The overall evidence clearly showed that the deceased’s sense of failure, which was in all likelihood magnified by his psychiatric anxiety, lingered on even after he had made the decision to resign from the IME. In other words, his new job prospects did not negate them.

270 A closer look at the requirements of the deceased’s new job in Nuvotronics suggests that not only did the deceased’s new job prospects not negate his sense of failure, it might in fact have very inadvertently and unfortunately exacerbated it. I elaborate more below.

271 The deceased would have known from 29 May 2012 when he accessed the Nuvotronics webpage that applicants for the position of a Senior Process Engineer would need to be eligible to pursue security clearance from the US Department of Defence (“DOD Clearance”). The forensic examination of the deceased’s HP Laptop also revealed that the deceased had visited the following websites relating to DOD Clearance on 21 June 2012 from 7.57 am to 8.29 am:

S/n	Time accessed	Webpage description
1	7.57 am	Information about the American military
2	7.58 am	Information about Military Reenlistment Eligibility Codes
3	7.59 am	Information about Military Reenlistment Eligibility Codes and reason for Separation Codes
4	8.00 am	Information about security clearance
5	8.00 am	
6	8.06 am	Information about Entry Level Separation
7	8.08 am	
8	8.09 am	Official website of the U.S. Department of Defense
9	8.10 am	Decision of the administrative judge on an application for Department of Defense security clearance by a former Air Force serviceman who had displayed suicidal tendencies and who had been subsequently discharged with an entry level separation (this application was denied)
10	8.10 am	Information about security clearance
11	8.11 am	Containing answers to the following question:
12	8.14 am	“I had an entry-level separation with the USN in 2008, and now I have been offered a job with the Department of Defense in their accounting department, contingent on a favorable outcome of a security clearance and background check. I am worried this entry-level separation will prevent me from attaining the required clearance and furthermore, the job. Now, I have heard both that it can hurt me, and that it won't hurt me because I was never fully in the military. Do you know the answer so I can have some peace of mind?”
13	8.15 am	Containing an answer to the following question:
14	8.16 am	“Hello, I have a question on a discharge issue. Back in 2003 I enlisted in the United States Navy. I went to basic training and everything went fine until I got a severe case of pneumonia, which lasted for a long time. It caused several problems even after I was cleared to go back to training even though I still had it. I still did what I was asked to do in exercises, but was eventually sent to the asthma clinic due to further complications. At the asthma clinic I

S/n	Time accessed	Webpage description
		tested positive for asthma and was separated during basic training. After I got back I saw a civilian doctor who discovered that there was still traces of pneumonia in my lungs after doing an x-ray. It was then discovered that this form of asthma may have been triggered by pneumonia. I never had a history of asthma until I got pneumonia. Two years later I was tested for asthma again by the same doctor and the results came back negative. I am fully convinced that the temporary asthma I had was not serious and was caused by pneumonia. I was issued an RE-4 code with a General under honorable conditions discharge from the Navy. I understand the RE-4 will prevent reenlistment, but will the General under honorable conditions discharge be an issue in gaining future employment even though this was an entry level separation? I am a college senior and was told from people it will not. Besides it was for a medical issue that I had no control over. I just wanted to see what you thought and what your advice would be. Thank you for your time and I apologize for this long message, but I wanted to explain the situation to the best of my ability.”
15	8.17 am	Forum on “How to get cut loose from the military”
16	8.17 am	Containing an answer to the following question:
17	8.17 am	“I recieved an entry level separation from the airfoce for performance and conduct. I got really sick for almost 2 months during basic training, went back to training and got sick again. Will this affect me when applying to a police department? Will an ELS show up on their backround check?”
18	8.18 am	Information on the various types of discharge and administrative separation
19	8.18 am	Information on military law and security clearance law
20	8.19 am	Wikipedia page on military discharge

272 The following information found on the website accessed by the deceased on 21 June 2012 at 8 am (*ie*, item 4 in the table set out at [271] above) is reproduced below because of its particular significance in the present case:

Information relating to the following issues may be considered significant in relation to holding a clearance:

- *Allegiance to the U.S.*
- *Foreign Influence*
- Foreign preference
- Sexual Behaviour
- *Personal Conduct*
- Financial Considerations
- Alcohol Consumption
- Drug Involvement
- *Emotional, Mental and Personality Disorders*
- Criminal Conduct
- *Security Violations*
- Outside Activities Misuse of Information Technology Systems

[emphasis added]

273 The information found on the website accessed by the deceased on 21 June 2012 at 8.10 am (*ie*, item 9 in the table set out at [271] above) is also particularly significant. This website contained the decision of US Administrative Judge Philip S. Howe dated 16 November 2004 in respect of an applicant's application for security clearance. The synopsis of the case is reproduced below:

Applicant is 28 years old. He joined the Air Force in 1995 at his father's insistence, but only served 28 days. He was discharged with an entry level separation after he cut his left wrist and disclosed he had suicidal thoughts after he joined the Air Force. Applicant did not disclose his entry level separation and his mental health evaluation on his security

clearance application. Applicant did not mitigate the personal conduct security concerns. Clearance is denied.

274 On 22 June 2012 at 4.04 am (Singapore Standard Time), Ms Kate de Gastyne (“Kate”) from Nuvotronics emailed the deceased asking him if he currently held any level of active DOD Clearance, or if he was eligible to pursue such clearance, if needed. Forensic examination of the deceased’s ACER CPU conducted by Deputy Superintendent of Police Sim Lai Hua revealed that the deceased had conducted further searches on DOD Clearance thereafter between 9.45 am and 11.15 am (Singapore Standard Time) as follows:

S/n	Time accessed	Webpage description
1	9.45 am	Wikipedia page on list of U.S. security clearance terms
2	9.48 am	Google search on “dod clearance levels”
3	9.48 am	Google search on “dod clearance eligibility”
4	9.48 am	Information on security clearance guidelines and factors used for determining security clearance approval/disapproval
5	10.16 am	Frequently asked questions on security clearance
6	10.28 am	Information on how to obtain a security clearance
7	10.32 am	Google search on “us security clearance eligibility”
8	10.32 am	Information from the U.S. Department of State on security clearances
9	10.32 am	Google search on “us security clearance eligibility”
10	11.15 am	Google search on “criteria for dishonorable discharge”
	11.15 am	Wikipedia page on military discharge

275 On 22 June 2012 at 10.15 am (Singapore Standard Time), the deceased replied Kate stating that he did not hold active DOD clearance but would be able to apply for it if needed.

276 The deceased's internet activity on both 21 and 22 June 2012 leads me to find that he had certain concerns about obtaining DOD Clearance for his new job in Nuvotronics. Such concerns probably arose as a result of his perceived involvement in violating US security (see [223] above) and/or the possibility that his two psychiatric diagnoses would impede his ability to obtain DOD Clearance should he declare them as legally required. As alluded to earlier at [272], the deceased would have known from his searches that these issues would affect his ability to secure DOD Clearance. Also, Mary Todd had given evidence that the deceased had previously served in the US Air Force. There was no evidence before me as to whether the deceased had any issues with his discharge, but one can infer from the contents of the deceased's internet activity on 21 and 22 June 2012 (see [271], [273] and [274] above) that the deceased might also have had some concerns about the effect that his prior military service in the US Air Force would have on his DOD Clearance. Whether these were self-perceived or actual concerns, one can only guess as the NOK's withdrawal from the proceedings deprived the parties and the court of the ability to ascertain this fact. All in all, the evidence shows that inasmuch as the deceased had made plans to return to the US and had a new job and his family reunion to look forward to, he was also quite clearly burdened by his perceived deep failures, and the possibility that such deep failures would follow him back to the US.

277 I pause here to also mention that the contemporaneousness of the deceased's internet activity and his email exchanges with Kate fortified my findings at [176] above that the deceased's internet history had not been planted by some external unknown source, whether by remote access or otherwise, at the very least insofar as the activity on 22 June 2012 was concerned.

**SUMMARY OF THIS COURT'S FINDINGS**

278 First and foremost, I was satisfied that Luis Montes was not a surprise witness to the NOK. State Counsel had specifically mentioned in open court and in chambers that the State was still trying to locate Luis Montes as he was not in the jurisdiction (see [8] above). The confirmation of Luis Montes as a witness was indeed rather late, but this was due to reasons that were not within State Counsel's control (see [9] and [12] above). When one also takes into account the fact that Richard and Mary Todd had actually met Luis Montes before at a get-together that they arranged for the deceased's friends at their hotel (see [12] and [116]), Luis Montes could not reasonably be said to have been a surprise witness to the NOK.

279 Next, I was satisfied that there had in fact been no improper influence of the IME employees as a result of the meeting held on 11 April 2013 (see [17] to [20] above), although the meeting was in itself improper (see [21] to [22] above).

280 As for the cause of the deceased's death, I firstly found that the evidence of Dr Wee, Dr Rao and Dr Fowler (see [132] to [139] and [146] to [162] above) stood up to scrutiny. They were able to refute all of the points that Dr Adelstein had raised in a manner that was cogent, internally and externally consistent, and supported by the relevant pathological findings and medical literature (see [164] above). In contrast, Dr Adelstein's evidence was unsupported, and in fact, at times *contradicted* by the relevant pathological findings and medical literature (see [165] above). Dr Adelstein's evidence which went beyond the scope of his role as a pathologist was nothing short of bizarre and extremely unhelpful in the way that it detracted from the critical pathological issues before the court (see [166] above). His change in opinion



at the CI was surprising and unsatisfactory because he had professed to have had sight of the autopsy report when he prepared his report (see [167] above). Either Dr Adelstein could not tell or had not properly read from the autopsy report that there were no other injuries to the deceased's neck, or, he had not considered this issue until after Dr Wee, Dr Rao and Dr Fowler pointed out to him that one would normally expect injuries to the neck in a case of garrotting (see [167] above). Both these possibilities present cause to view the credibility of Dr Adelstein's evidence with a great degree of circumspection (see [167] above). I was also inclined to place greater weight on the evidence of Dr Wee, Dr Rao and Dr Fowler as they have more experience, and more qualified one at that, than Dr Adelstein (see [168] to [169] above). There was also no basis to doubt the independence or competence of Dr Fowler and Dr Rao (see [170] to [171] above). Dr Adelstein had, on his very own accord, showed himself to be an incredible and unreliable expert witness (see [172] above). For all of these reasons, I accepted the evidence of Dr Wee, Dr Fowler and Dr Rao, and rejected the evidence of Dr Adelstein. The weight of the deceased's lungs and the absence of petechiae were not inconsistent with asphyxia due to hanging, and none of the marks on the deceased's hands, neck, forehead and ear were bruises but were instead signs of post-mortem lividity. The evidence was inconsistent with death by a taser, carotid arm lock and the possibility of there having been another person or other people involved in the deceased's death. Instead, the evidence was incontrovertibly consistent with asphyxia due to hanging. I thus consequently found that the medical cause of the deceased's death was *asphyxia due to hanging*.

281 There was no basis to doubt the authenticity of the evidence presented by the State, namely, the deceased's HP laptop (see [176] above), the 1<sup>st</sup> and 2<sup>nd</sup> Post-It Notes (see [177] to [180] above), the PDF Note (see [181] to [197]

above), the data on the deceased's HTC mobile phone (see [198] to [199] above) and the photographs taken by the police (see [200] above).

282 After considering all the evidence before me, I was also satisfied that there was no foul play involved in the deceased's death. The deceased was not in possession of confidential and valuable classified information in the course of his employment at the IME (see [203] to [207] above). The Potential GaN Power Amplifier Project did not ever materialise (see [208] to [212] above). Even if it did (which I did not find), the listed specifications show that it would not have violated general export control laws, nor could it have been used for military applications; and the IME would not have surreptitiously researched beyond the listed specifications (see [213] to [223] above). The deceased was also not placed in a position of conflict as a result of him using the MOCVD System supplied by Veeco for a device to be researched in collaboration with Huawei (see [224] to [226] above). There was also nothing remotely suspicious associated with the access of the files on the HDD on 23 and 27 June 2012 (see [227] to [241] above). In addition, reasons and motives aside, the available evidence was inconsistent with the possibility that there was foul play involved in the deceased's death (see [242] to [246] above).

283 The evidence before me instead compels me to find, beyond reasonable doubt, that the deceased had committed suicide by hanging himself. There was firstly overwhelming evidence that the deceased had entertained suicidal ideations of overall increasing severity in the months leading up to his death (see [247] to [256] above). The scene found on 24 June 2012 was also consistent with that of the deceased having committed suicide on his own, without the assistance of any other persons (see [257] to [265] above). Not only did the deceased's new job prospects not negate the deceased's sense of failure (which was in all likelihood magnified by his

psychiatric anxiety), it might in fact have inadvertently and unfortunately exacerbated it (see [269] to [276] above).

284 Now to put the pieces together, the circumstances leading to the deceased's decision to commit suicide were, in my view, as follows. To begin with, the deceased faced great difficulty coping with the demands of the GaN Group arising from his inexperience in this field of research and what was to him a high volume of workload which included a substantial amount of paperwork. The deceased was known to be a perfectionist and probably took it hard upon himself when he failed to attain a certain level of proficiency in the GaN field of research. The deceased was also unhappy with certain management decisions such as the change in the Clean Room for the storage of the MOCVD System and the consequential delay in the delivery of the MOCVD System (see [39] above), the cancellation of his presentation at the Consortium Meeting (see [49] above), Dr Lo's request for him to try to ask certain information pertaining to general market intelligence about the Silicon Photonics and the Indium Phosphide market from Alex (see [53] to [55] above) (but not including the GDS files (see [52] above)), and the possibility that the Potential GaN Power Amplifier Project would threaten US security (see [213] to [223] above). It was also possible that the deceased felt that his hard work at the IME had not been recognised (see [66] above). These factors probably in part or in whole triggered a relapse of his previous history of depression sometime before or around March 2012, this time with a significant component of anxiety. In the specific context of the deceased's case, his psychiatric condition included suicidal ideations of an overall increasing severity over the last few months of his life, which he had masked from the people around him.

285 At the time of his death, the major stressor in the deceased's mind was unlikely to be his workload. This was because the deceased had already tendered his resignation in May 2012 and his workload had gradually decreased whilst he served his 60-day notice. Why then, did the deceased commit suicide *after he had resigned from the IME*? Dr Lee's evidence, which I accepted, was that the removal of a major stressor in a patient's life would not necessarily mean that the patient would recover, let alone recover spontaneously, even if they had a loving and supportive family, because the root of depression is ultimately due to chemical imbalances. This is logically all the more so when a patient's condition is of some severity, as was in the deceased's case. In all likelihood, the deceased was still suffering from depression and anxiety even after quitting his job, as evidenced by his suicide-related internet activity and the drafting of the suicide notes.

286 A related question that follows is why then would the deceased commit suicide *before he was due to return to the US*? The evidence showed that the deceased was concerned about his ability to obtain DOD Clearance for his new job in Nuvotronics because of his perceived involvement in violating US security, the possibility that his psychiatric condition would impede his ability to obtain such clearance and/or possible issues with his previous service in the US Air Force (see [270] to [276] above). These concerns in all likelihood caused him to feel that his deep sense of failure (which was magnified by his psychiatric anxiety) would follow him back to the US. In the deceased's mind, all these factors eventually outweighed the happy prospects of reuniting with his family in the US and culminated in his ultimate decision to take his own life on 24 June 2012, before he was due to return to the US.

**CONCLUSION**

287 Having carefully considered all the evidence adduced in this CI, and for the reasons mentioned herein, I hereby record the following findings:

- (a) **The deceased was Shane Truman Todd, Passport No 047507887, male/31 years old, born on 5 September 1980.**
- (b) **The deceased was pronounced dead at his apartment located at No 56, Spottiswoode Park Road, Singapore 088648, at 7.20 pm on 24 June 2012.**
- (c) **The cause of the deceased's death was asphyxia due to hanging. The time of his death could be placed sometime between 7 am to 1 pm on 24 June 2012.**
- (d) **There was no foul play involved in the deceased's death.**
- (e) **The deceased had committed suicide by hanging himself.**

288 I thank all counsel for their invaluable assistance to the court in this CI. I also thank all the witnesses who have assisted in the police investigations and who gave evidence at this CI. In particular, I wish to record my appreciation for the time and effort expended by the expert witnesses in putting up their reports and for their patience in explaining the contents and conclusions therein to the court.

289 Lastly, I would like to extend the court's condolences to the deceased's family for their loss. It was evident for all to see that the deceased was loved by, and had loved, the people in his life, both in Singapore and in the US. I am encouraged to note that the deceased's family is tightly-knitted and have also

shown support to Shirley. I hope that the family will be able to find closure and I wish them all the best.

**CHAY YUEN FATT**  
**State Coroner**  
**8 July 2013**

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